



General Engineering Integrated Services Company



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Sun- Thu: 8:00 AM – 5:00 PM



ARCEEN Engineering General Services:

We provide integrated **Architecture, Engineering, and BIM consultancy services** designed to support complex developments and large-scale projects from concept to delivery.

- **Architectural & Engineering Design**
High-quality, compliant, and future-ready design solutions aligned with local regulations and international standards.
- **BIM Management & Digital Delivery**
Advanced BIM strategies, coordination, and data-driven workflows that enhance clarity, reduce risk, and improve project performance.
- **Planning & Feasibility Studies**
Strategic planning, technical studies, and early-stage advisory to support informed decision-making.
- **Project & Design Management**
Structured management of scope, quality, cost, schedule, and risk across all project stages.
- **Construction Support & Technical Supervision**
On-site and digital support to ensure design intent, coordination, and compliance during construction.
- **Sustainability & Compliance Advisory**
Support for LEED principles, energy efficiency, HSE standards, and sustainable design practices.

Who is ARCEEN?

ARCEEN is an integrated Architecture, Engineering, and BIM consultancy established in Egypt in 2018 with a clear regional and global vision. We specialize in delivering intelligent design solutions that combine technical excellence, digital innovation, and strategic leadership to support complex projects across multiple sectors.

Built on strong professional experience and deep industry knowledge, **ARCEEN** provides end-to-end consultancy services ranging from architectural design and engineering coordination to advanced BIM management and digital project delivery. Our approach ensures accuracy, efficiency, and value creation throughout the entire project lifecycle.

With Egypt as our operational base, we actively serve and target key regional markets, including Saudi Arabia, the UAE, and Africa, while working toward long-term expansion into European markets by 2035. Our growth strategy is supported by scalable systems, strong partnerships, and a commitment to developing high-performing teams capable of meeting international standards.

At ARCEEN, we believe that successful projects are driven by people, innovation, and collaboration. Our leadership philosophy empowers teams, encourages creative problem-solving, and aligns technical expertise with our clients' strategic objectives. This allows us to deliver sustainable, future-ready solutions that respond to today's challenges and tomorrow's opportunities.





ARCEEN HISTORY:

Founded in **Egypt**, in **2018** was established by Architect Mohamed Ismail, an experienced professional Architect with a strong background in architecture, engineering, and BIM consultancy for more than 25 Years Experience, driven by a vision to support the transformation of the built environment across the region.

From its early stages, ARCEEN's growth has been closely aligned with the rapid development taking place in **Egypt and the Middle East**, particularly within Saudi Arabia and the UAE. The company has been privileged to contribute to complex projects that support urban expansion, infrastructure development, and national transformation programs.

As ARCEEN continues to grow, its journey remains closely connected to the progress of the cities and communities it serves—delivering technical excellence, digital innovation, and sustainable solutions that support long-term regional development.



ARCEEN Local Insight and Global Expertise:

At **ARCEEN**, we deliver integrated architecture, engineering, and BIM consultancy solutions tailored to the unique requirements of the **Saudi and UAE markets**, while applying internationally recognized standards and global best practices. Our work supports national development goals, large-scale programs, and private sector investments across the built environment.

We understand the rapid transformation taking place across the Gulf region—from mega developments and smart cities to infrastructure, hospitality, healthcare, and mixed-use projects. ARCEEN works closely with **government entities, developers, and international consultants** to plan, design, and manage projects that align with **Vision 2030**, sustainability objectives, and long-term economic growth.

As a trusted regional partner, we bring together multidisciplinary teams with strong local insight and global technical expertise. Our services span **architectural design, engineering coordination, BIM management, digital delivery, and strategic consultancy**, enabling seamless collaboration and high-performance project outcomes across all stages.

Our adaptable and scalable approach ensures **quality, efficiency, and compliance** with local regulations, international codes, and project-specific requirements. Whether supporting complex giga projects or specialized developments, ARCEEN provides a **single, reliable source of integrated solutions**, delivering value, innovation, and long-term success.





OUR VISION :

To become a leading regional and international Architecture, Engineering, and BIM consultancy, recognized for digital excellence, innovative design, and strategic leadership in shaping sustainable, smart, and future-ready built environments across the Middle East, Africa, and Europe.

Our Mission :

"ARCEEN is committed to delivering innovative, high-quality architectural and engineering solutions that blend functionality, aesthetics, and sustainability. We strive to empower our clients with smart, digital design practices, leveraging advanced technologies and a collaborative approach to create spaces that inspire, perform, and stand the test of time."

Our Ethos

At ARCEEN, our ethos sits at the core of everything we do. It defines how we lead, how we work, and how we deliver value to our clients, partners, and the communities we serve.

We bring together diverse talents, experiences, and cultures to create an environment where people are motivated, empowered, and inspired to perform at their best. A clear purpose guides our work to make a positive, ethical, and lasting impact on the built environment while supporting national development goals and societal progress.





ARCEEN is an integrated Architecture, Engineering, and BIM consultancy delivering high-performance solutions for complex developments and mega projects across Egypt, Saudi Arabia, the UAE, Africa, and the Middle East.

Rooted in technical leadership and driven by innovation, we partner with governments, developers, and global consultants to plan, design, manage, and deliver future-ready environments, aligned with Global Vision 2030, sustainability goals, and international standards.

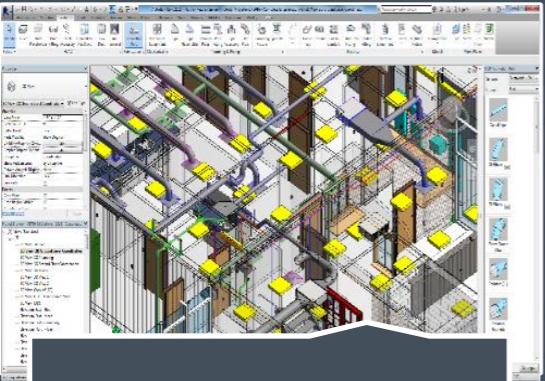




Our Services :



Architecture Design



Engineering Design



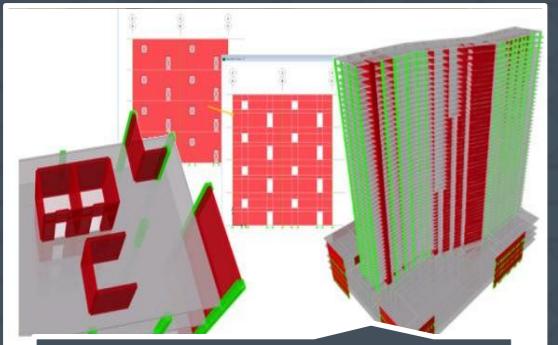
BIM Solutions



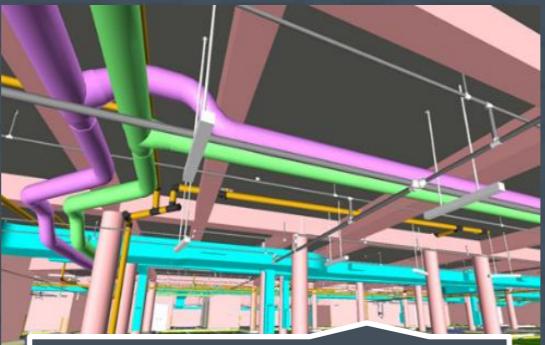
Project Management



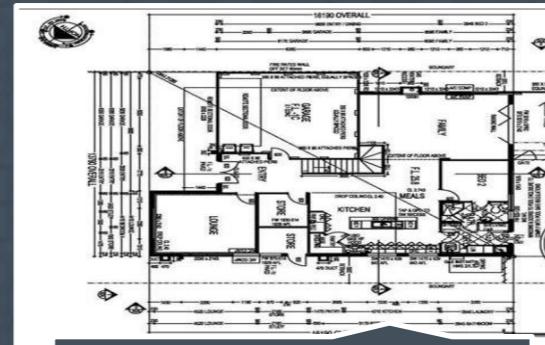
Technical Support



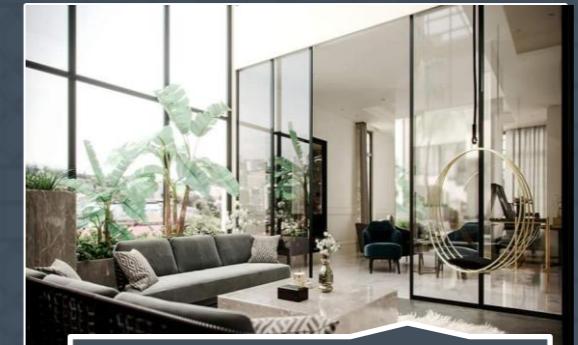
Steel Design



Detailing Up to LOD 500 & 7D Simulation



Value Engineering



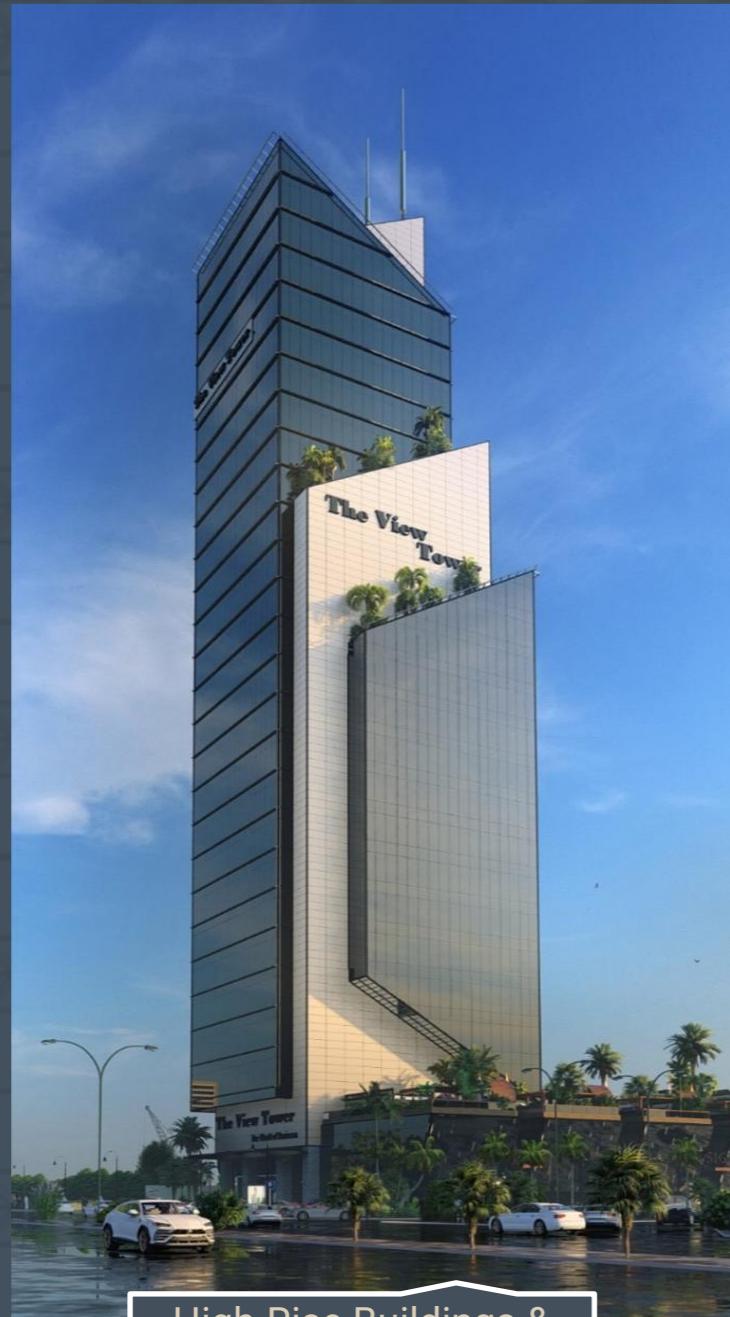
Interior Design



BIM Training



Overall Projects:



High-Rise Buildings & Towers



Office Buildings



Educational Projects



Hotels Projects



Medical Projects



Urban Projects



Commercial Projects



Multi-use Projects



Mega Projects



Residential Projects



Overall BIM Services:

BIM for Designers and Consultants:

- Architecture BIM Services
- Structure BIM Services
- Mechanical BIM Services
- Electrical BIM Services
- Steel BIM Services
- BIM For Civil & Infrastructure
- Urban BIM Design

BIM for Contractors :

- Reinforcement Rebaring
- Precast BIM Modeling
- Fabrication Modeling
- Families Creations
- Materials Creations
- Key Noting & Coding

BIM Advanced Services & Simulation:

- 4D – BIM Scheduling
- 5D – BIM Cost Management
- 6D – Sustainability Design & Green BIM
- 7D – Facility Management & Life Cycle
- BIM Auditing & Reviewing
- VR – AR Simulation
- Leaser Scanning & Cloud Point Scan

LEED Design:

- LEED KPI's Application
- Energy Modeling
- Acoustic Modeling
- Solar Analysis
- Environmental Modeling and Analysis
- LEED Certification

BIM LOD's:

- LOD 200
- LOD 300
- LOD 350
- LOD 400
- LOD 500
- BIM / CAD / Drafting Services
- BIM & CAD Shop-Drawings

Digital Design Transformation:

- CAD to BIM Solutions
- CAD Shop-Drawings
- BIM & CAD Integration
- Drafting
- BOQ & Specs
- IFC & Construction Drawings

Our BIM Projects are only in-house and not accepted for use by external resources.

All Models are integrated with our / Project BEP and uploaded on the ACC Platform, aligned with ISO 19650 and Local Project Codes



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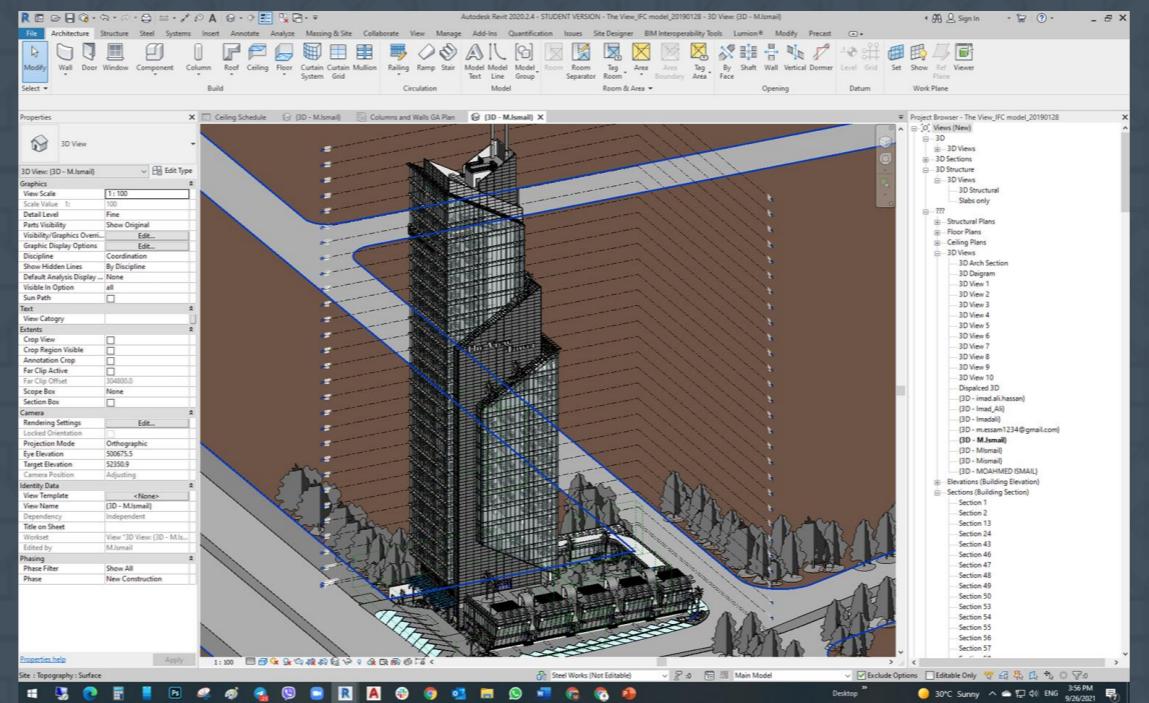
Our BIM Team:

ARCEEN with a team of 15 skilled architects has been offering a plethora of Architectural BIM services including conversion of design drawings to accurate construction documents and 3D models with parametric families. We ensure that our customers get the most out of experience in associating with Architects, General Contractors, Builders, and Engineers in some of the prestigious projects of the twentieth century.

Our services are focused on assisting our clients in cutting downtime and costs, offering them more value for money than what can be gained from conventional 2D drafting. Building Information Modeling(BIM) is a great tool for visualization. It enables a three-dimensional virtual representation of the building. During a project's bidding phase, renderings, walkthroughs, and sequencing of the model may be presented with better clarity.

ARCEEN Architectural 3D modeling service is one of our core services which we cater to a clientele involving architects, general contractors, stakeholders, owners, and builders. We have successfully handed over a substantial number of residential, commercial and hospitality projects ever since the inception of the company.

ARCEEN Construction documentation is the process of developing, refining and documenting design drawings with additional detailing such as product & material specifications, contract requirements and installation details. Construction documents or CD sets, as they are often referred to, provide essential information for the building design and construction and serve the purpose of building permit application, bidding and construction contract administration. Regardless of the building type or design, we are experts in preparing detailed Construction Documents that help contractors and construction professionals make sense of the design from a sea of information associated with the project. We utilize BIM to prepare comprehensive and accurate CD sets for various engineering trades and help communicate the design intent.





Overall Design BIM Projects:

Project NO	Project Name	Project Location	BIM LOD	Client / Owner	BUA
BIM Medical Projects					
01	Children Hospital – 200 Beds Addex Award 2020	Egypt - Tanta	LOD 300	Tanta University Medicine Collage	6800 sqm
02	General Hospital – 600 Beds 900-900 Hospital	Egypt – El Mahala	LOD 400	Tanta University Medicine Collage	50,000 sqm
03	Al Faysal General Hospital – 50 Beds	KSA – Jizan	LOD 350	Private Sector	6000 sqm
04	General Hospital 200 Beds	KSA – Al Ahsa	LOD 300	Private Sector	8000 sqm
05	Kidney Hospital 200 Beds	Egypt - Tanta	LOD 400	Tanta University Medicine Collage	9000 sqm
06	Andalusia Hospital 200 Beds	Egypt - Cairo	LOD 200	Private Sector	4500 sqm
07	Andalusia Hospital 200 Beds	Egypt - Cairo	LOD 300	Private Sector	12,000 sqm
Project NO	Project Name	Project Location	BIM LOD	Client / Owner	BUA
BIM Housing Projects					
01	Private Villas	Egypt – KSA – UAE - Jordon	LOD 300	Private Sector	+ 8000 sqm
02	Housing Complexes	Egypt – KSA	LOD 300	Private Sector	+ 30,000 sqm
03	Compounds	Egypt – New Cairo	LOD 350	Private Sector	10,000 sqm
04	Resorts	Egypt – North Cost	LOD 300	Private Sector	45,000 sqm



Overall Design BIM Projects:

Project NO	Project Name	Project Location	BIM LOD	Client / Owner	BUA
BIM Medical Projects					
01	Private School	KSA – Al Ahsa	LOD 300	Private Sector	8000 sqm
02	Elite University	Egypt – Alexandria	LOD 350	Private Sector	150,000 sqm
03	Al Borg University	Egypt – Alexandria	LOD 350	Private Sector	80,000 sqm
04	Private School	Egypt – Cairo	LOD 300	Private Sector	289,900 sqm
Project NO	Project Name	Project Location	BIM LOD	Client / Owner	BUA
BIM Commercial Projects					
01	The View Tower	KSA – Al Ahsa	LOD 400	Private Sector	23,000 sqm
02	The Icon Tower	KSA – Al Ahsa	LOD 350	Private Sector	5000 sqm
03	Khartoum Office Tower	Sudan - Khartoum	LOD 300	Private Sector	8200 sqm
04	The Qubica Plaza	KSA – Dammam	LOD 300	Private Sector	12,000 sqm
Project NO	Project Name	Project Location	BIM LOD	Client / Owner	BUA
BIM Hotels Projects					
01	OuZO	Libya – Benghazi	LOD 400	Private Sector	23,000 sqm
02	The View Hotel	KSA – Riyadh	LOD 300	Private Sector	8000 sqm

Note: Some of our projects are not mentioned according to the printing date or the client's approval.



Most Selected Projects
2018 to 2025
IFC BIM Design



Our Most Selected Projects – TOWERS & HOTELS :

THE CULF HOLET - KSA



Business Park - KSA



The VIEW Tower - KSA





Our Most Selected Projects – Commercial Projects:

The Icon Tower – Al Ahsa – KSA:

IFC DESIGN – BIM LOD 500

Projects Information:

- Project Location: Al Ahsa - KSA
- Owner: Huliby Group
- Client: Private
- Project Status: Delivered
- Lot Size: 5000 sqm
- Total BUA: 8500 sqm
- Project Type: New Construction
- Our BIM Scope: BIM Tender Package LOD 500
- Full IFC BIM Design





Our Most Selected Projects – Medical Projects:

900-900 General Hospital – Tanta – Gharbia - Egypt

IFC DESIGN – BIM LOD 400

Projects Information:

- Project Location: Tanta – Gharbia - Tanta
- Owner: Tanta University
- Client: Medicine College
- Project Status: Delivered
- Lot Size : 20,000 sqm
- Total BUA: 50,000 sqm
- Project Type: New Construction
- Our BIM Scope: BIM Tender Package LOD 400
- Full IFC BIM Package





Our Most Selected Projects – Medical Projects:

Kidney Hospital – Egypt – Gharbia – Tanta University:

IFC DESIGN – BIM LOD 500

Projects Information:

- Project Location: Tanta – Gharbia - Tanta
- Owner: Tanta University
- Client: Tanta University - Medicine College
- Project Status: Delivered
- Lot Size: 15,000 sqm
- Total BUA: 50,000 sqm
- Project Type: New Construction
- Our BIM Scope: BIM Tender Package LOD 500
- IFC Clash Free Design





Our Most Selected Projects – Residential Projects:

AI SADEQ Tower – Dammam – KSA:

IFC DESIGN – BIM LOD 400

Projects Information:

- Project Location: Dammam - KSA
- Owner: Sadeq Group
- Client: Private – Real Estate
- Project Status: Delivered
- Lot Size: 6,000 sqm
- Total BUA: 50,000 sqm
- Project Type: New Construction
- Our BIM Scope: BIM Tender Package LOD 400
- Full IFC Clash-free BIM Design





Our Most Selected Projects :





ARCEEN
Architects , Engineering & BIM



www.arceen.com



Digital Design Services BIM Solutions





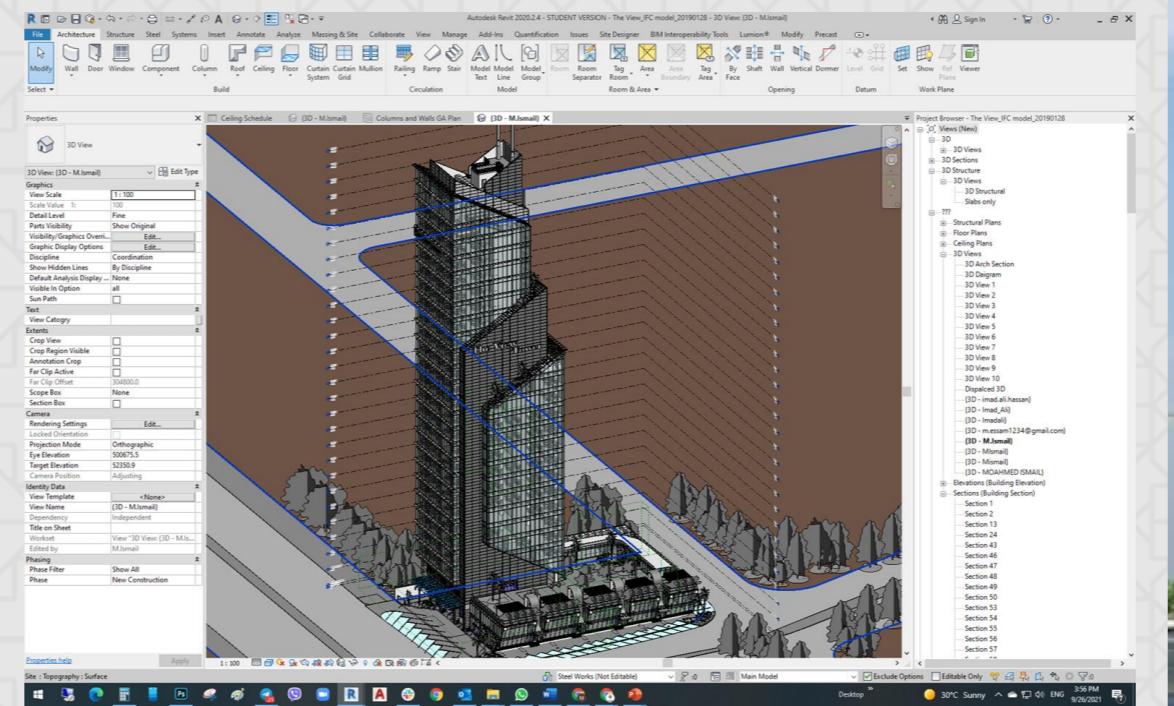
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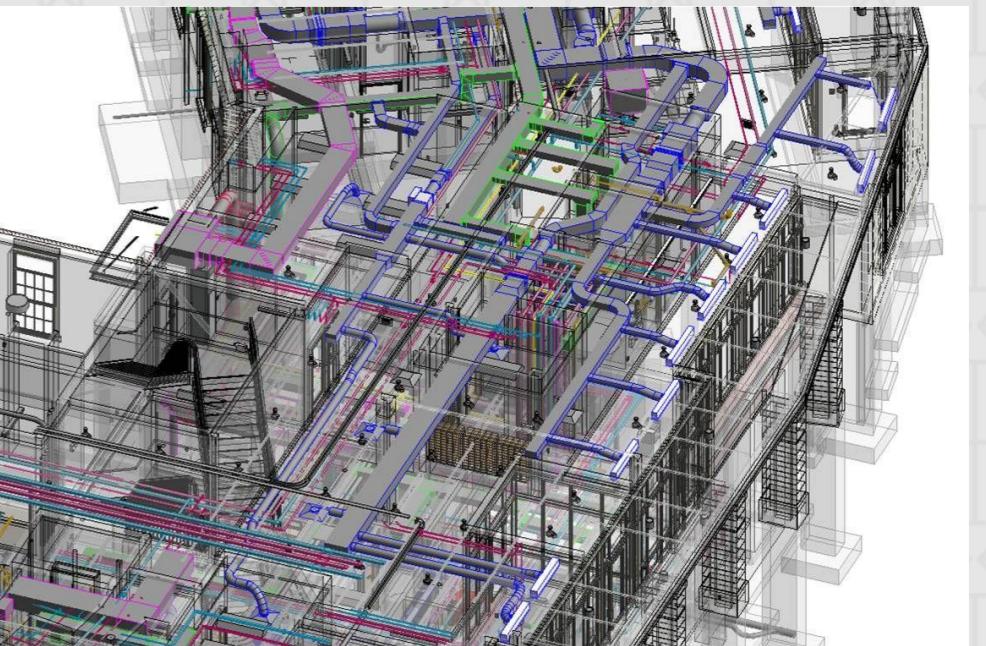
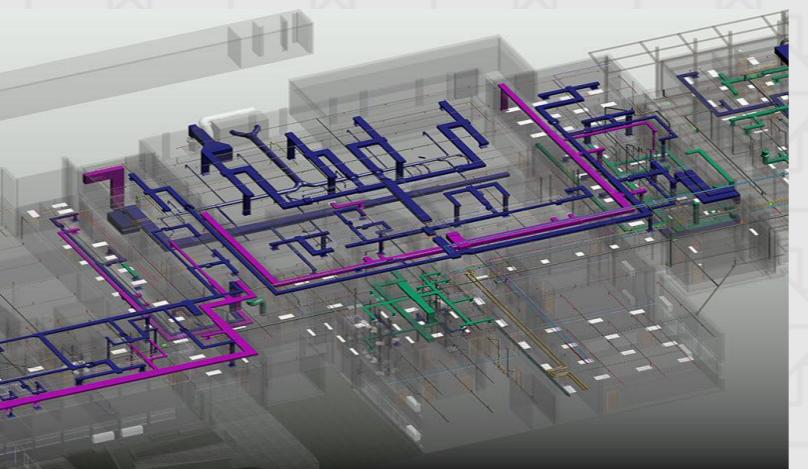
ARCEEN MEP BIM Department

ARCEEN offers full-service solutions for all your MEP Building Information Modeling (BIM) requirements. We place ourselves before the AEC industry as a conversant workforce of MEP/HVAC engineers providing MEP BIM services to various sectors which include educational institutions, healthcare, plants, residential, commercial and industrial buildings.

Driven by the extensive experience gained from our association with HVAC/ MEP consultants, contractors, fabricators and manufacturers around the globe for the past decade, we provide MEP/HVAC BIM services of impeccable quality while strictly adhering to the international industrial standards set by ASHRAE, SMACNA, NFPA and IEEE

ARCEEN MEP BIM Coordination Services include HVAC BIM, Piping BIM, and Plumbing BIM Coordination Services for Mechanical, HVAC, Electrical & Plumbing Contractors/ Engineers. Our project specialization for providing MEP drafting services are targeted towards Residential, Commercial, Hospital, Educational, and Industrial Buildings & Multi-purpose buildings. We make use of the advanced software packages such as Autodesk Revit, AutoCAD MEP and Navisworks for creating the detailed plan, elevation and section drawings for MEP services which include the development of coordinated and single services drawings to further aid installation teams to reflect our coordination systems during erection.

ARCEEN provide MEP 3D Modeling, MEP BIM and detailed construction documents to retailers, homeowners, architects and general contractors. Our MEP (M&E) services include 3D MEP Coordination and clash detection. We cater to demands from, residential, offices, leisure, healthcare, education and commercial sectors to customers across a number of countries.





ARCEEN Structure BIM Department

ARCEEN Over the past decade, we have successfully completed a significant number of Structural BIM projects of varying complexities for Residential, Commercial and Industrial structures. It is this vast experience our team possess that enables them to seamlessly transform your schematic designs and construction drawings into clean Revit BIM models with parametric families irrespective of its complexity.

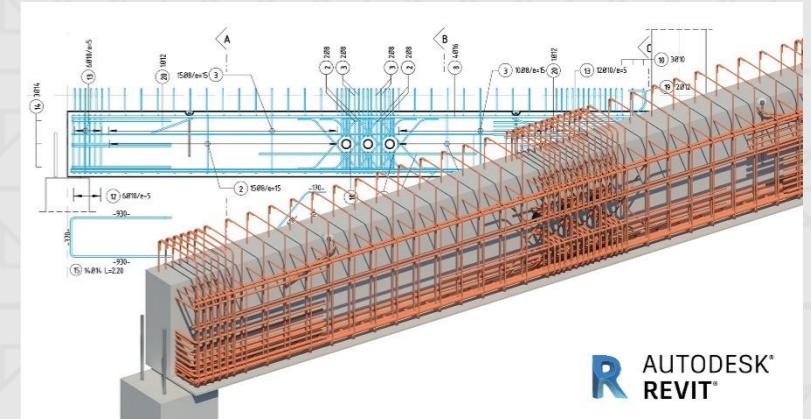
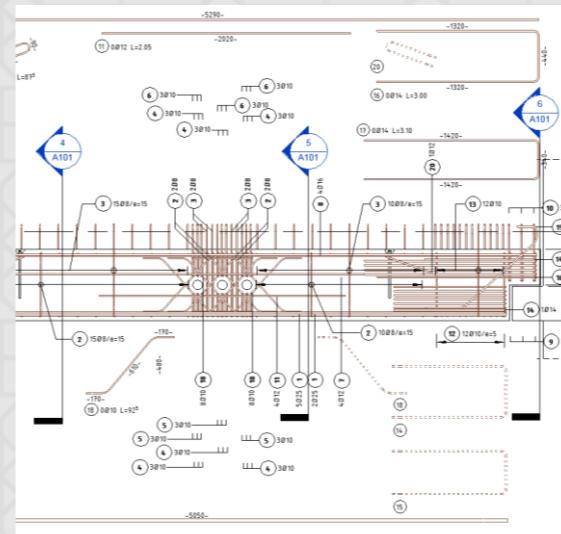
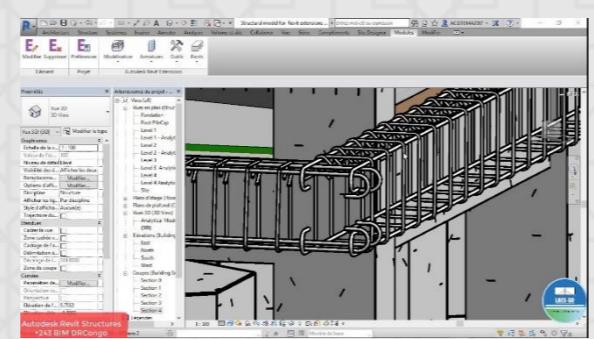
ARCEEN team of Structural, equipped with cutting-edge technologies of the industry, ensure quick turn-around-times, top quality and cost-effectiveness, **ARCEEN** functions just like an extension of your team.

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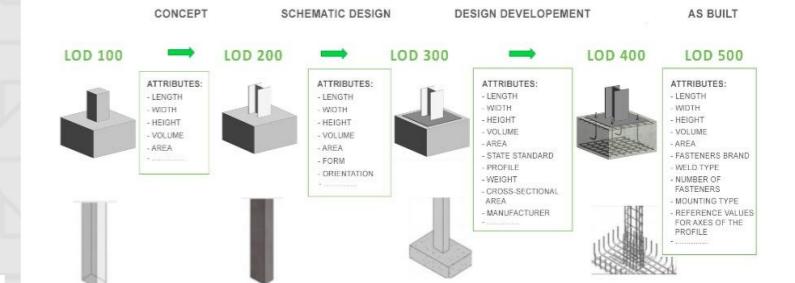
ARCEEN provides all BIM related services such as 3D Modeling, rebar & precast detailing, shop drawings, construction documentation, and quantity survey & estimation. Our steel detailers are well versed in using the software Auto Cad, Tekla, Advance Steel and Revit.

Regardless of whether your task is Industrial, Commercial, Infrastructural or Residential, our well-versed staff will provide complete, accurate and on-time drafting and modeling services. **PYLON** is firmly committed to customer satisfaction!

- The International Standards we Follow
- American Institute of Steel Construction (AISC)
- Saudi Building Code (2019) (SBC)
- Egyptian Building Code (2020) (EBC)
- British Constructional Steelwork Association (BCSA)
- The European Confederation of Iron and Steel Industries
- Swedish Institute of steel construction (SBI)



BIM - LEVEL OF DEVELOPMENT (LOD)





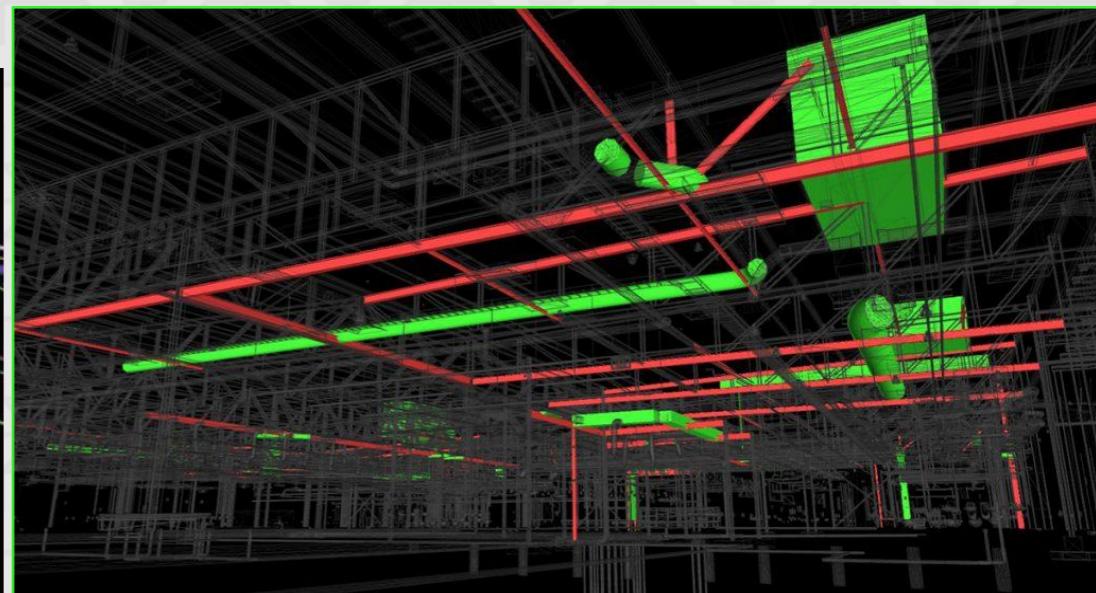
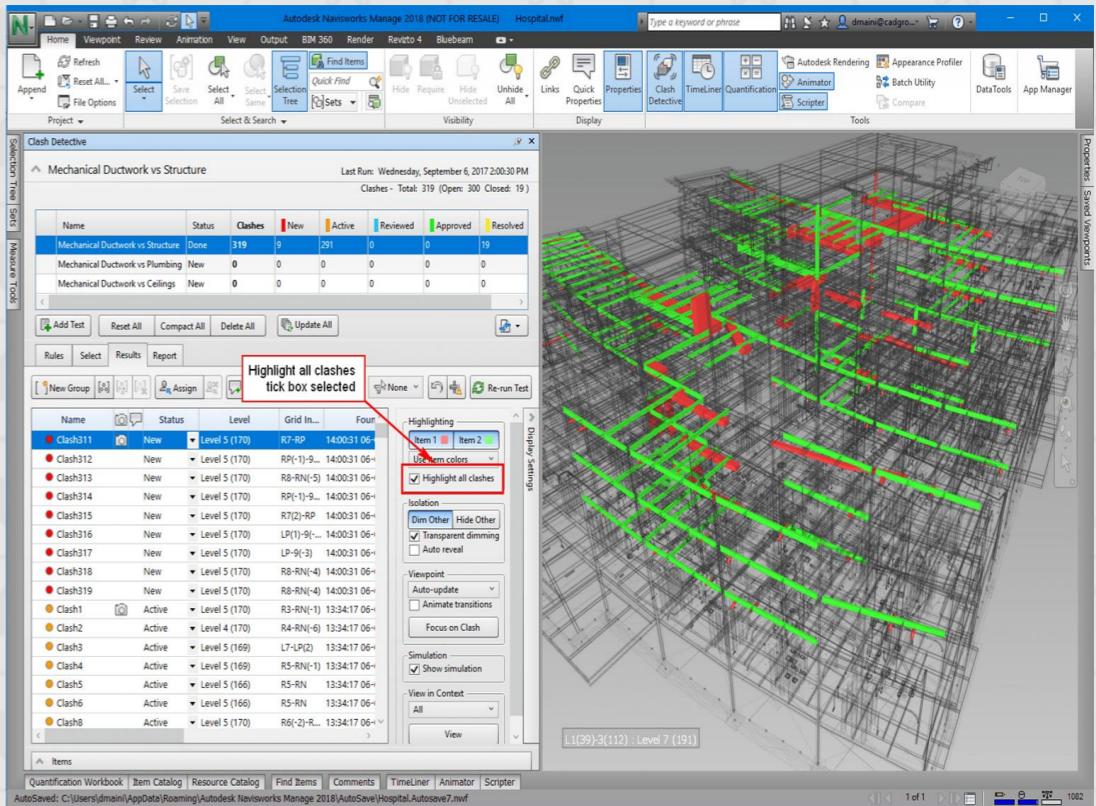
ARCEEN Coordination BIM Services:

ARCEEN understands the importance of having a clash-free MEP BIM model for installation.

We use the state-of-the-art clash detection software, Autodesk NAVISWORKS, to perform MEP clash detection. The engineers at ARCEEN have 10+ years of experience with Autodesk NAVISWORKS, enabling us to deliver clash-free MEP BIM models for a wide range of projects, regardless of size or complexity.

Our MEP Clash Detection Service Includes:

1. Identifying and listing the soft and hard clashes in the MEP model
2. Resolving the clashes
3. Creation of a detailed report of all the clashes.
 - How Big a Project are we Capable of Handling?
 - We have a dedicated team of 60 plus MEP engineers with significant experience in working for the globally leading clients on a wide array of projects. The perfect blend of human resources and software packages enables us to carry out projects irrespective of size and complexity.
- Our Tailored Solutions:
- Here at ARCEEN, we have broken down the MEP clash detection process into two stages
- The first stage involves carrying out clash detection in the BIM designing tool Revit MEP.
- The second stage involves incorporating the external clash detection tool Autodesk NAVISWORKS.
- The two-stage clash detecting process ensures zero flaws in the final deliverable.





ARCEEN As-Built LOD 500 - BIM Services

As-built Modeling is one of our specialties, delivered with 100% accuracy to meet our clients' specific requirements. For over a decade, we have been offering as-built drawings to general contractors, retailers, architects, homeowners, and builders.

ARCEEN caters to the demands for as-built services from clients worldwide across residential, office, leisure, education, healthcare, commercial, and government sectors.

The final set of drawings forwarded to the client after project completion is called an as-built drawing. This drawing shows the existing site conditions immediately after installation or erection. We include all modifications in the drawing made to the original construction. The as-built drawing we provide helps our client compare the existing building with the design-stage condition.

Point Cloud to As-Built BIM Modeling

For As-Built BIM modeling projects, we export the point cloud data set to Revit (BIM platform).

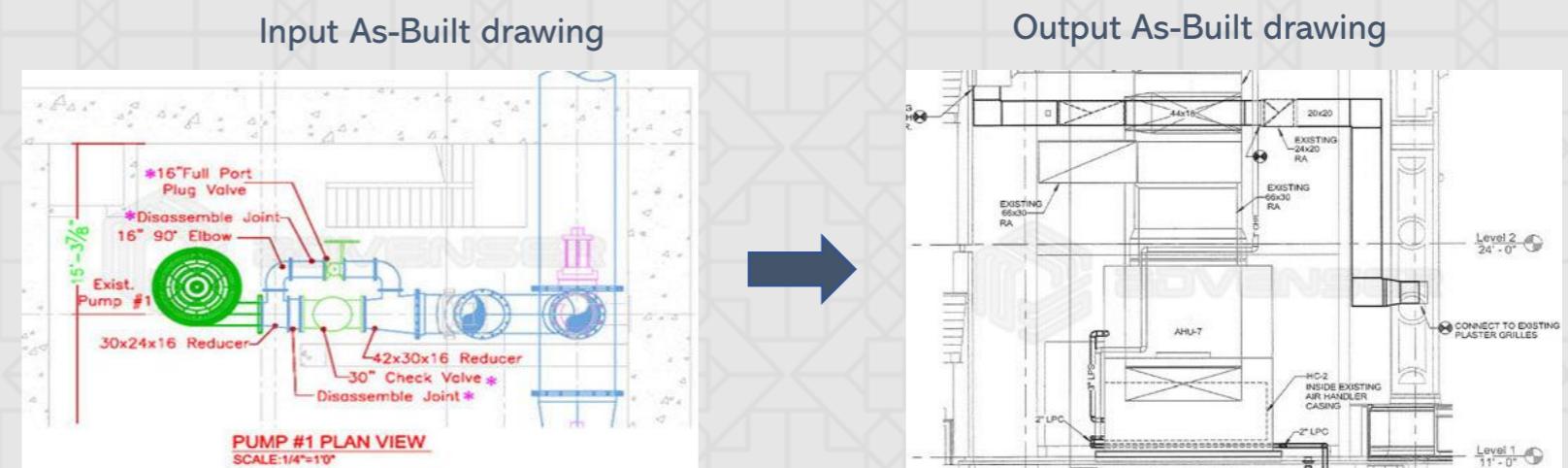
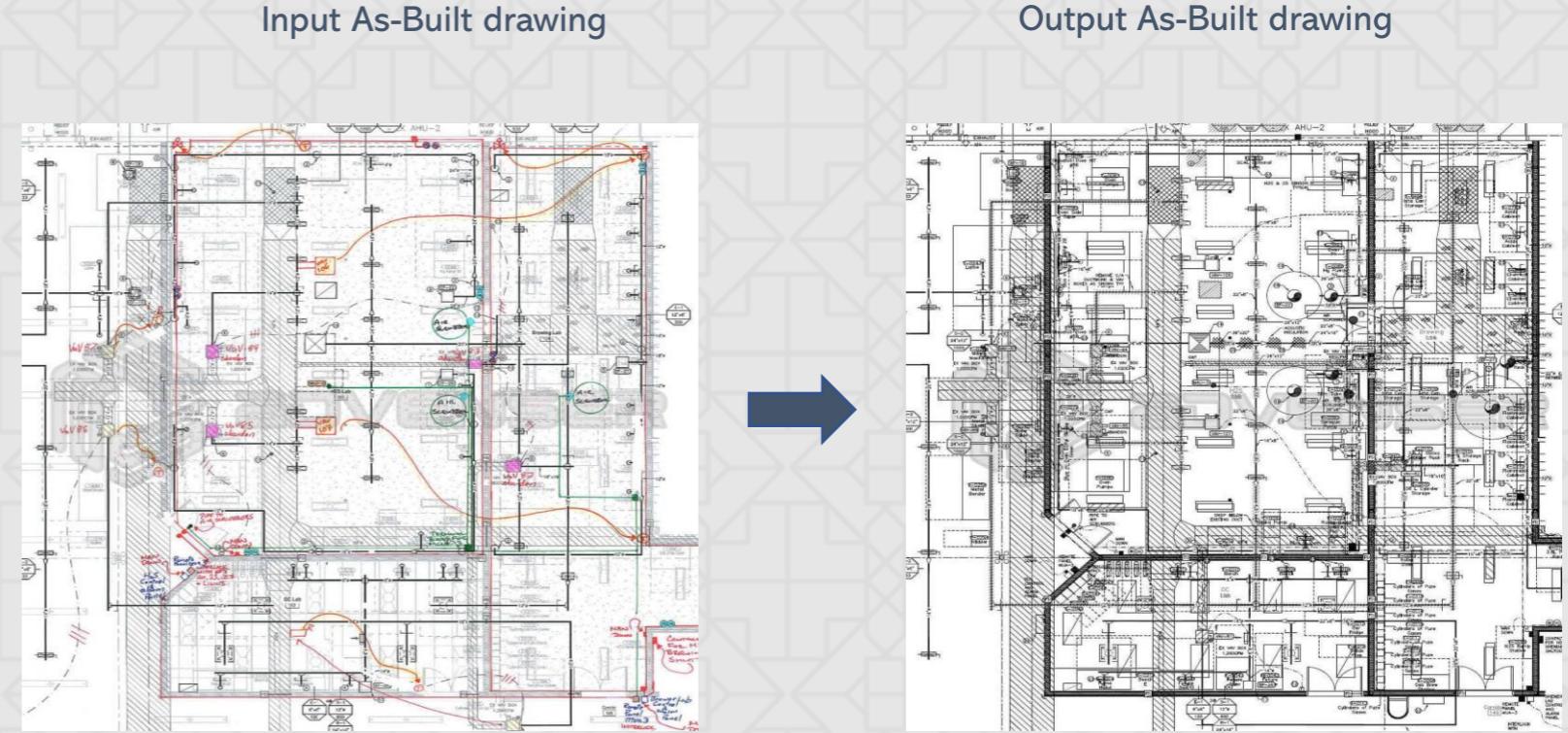
An as-built building information model with accuracy depicting pipes, slabs, terrain, walls, roof planes, and vegetation in and around the building is delivered to the client

Markups to As-Built/Model Drawing

After the installation process, the client forwards the red markups, and we provide the as-built conditions markup.

We work on the markup drawings to develop the project's As-Built drawing.

For this task, our team of engineers uses Revit, AutoCAD, AutoCAD MEP, and AutoCAD architecture





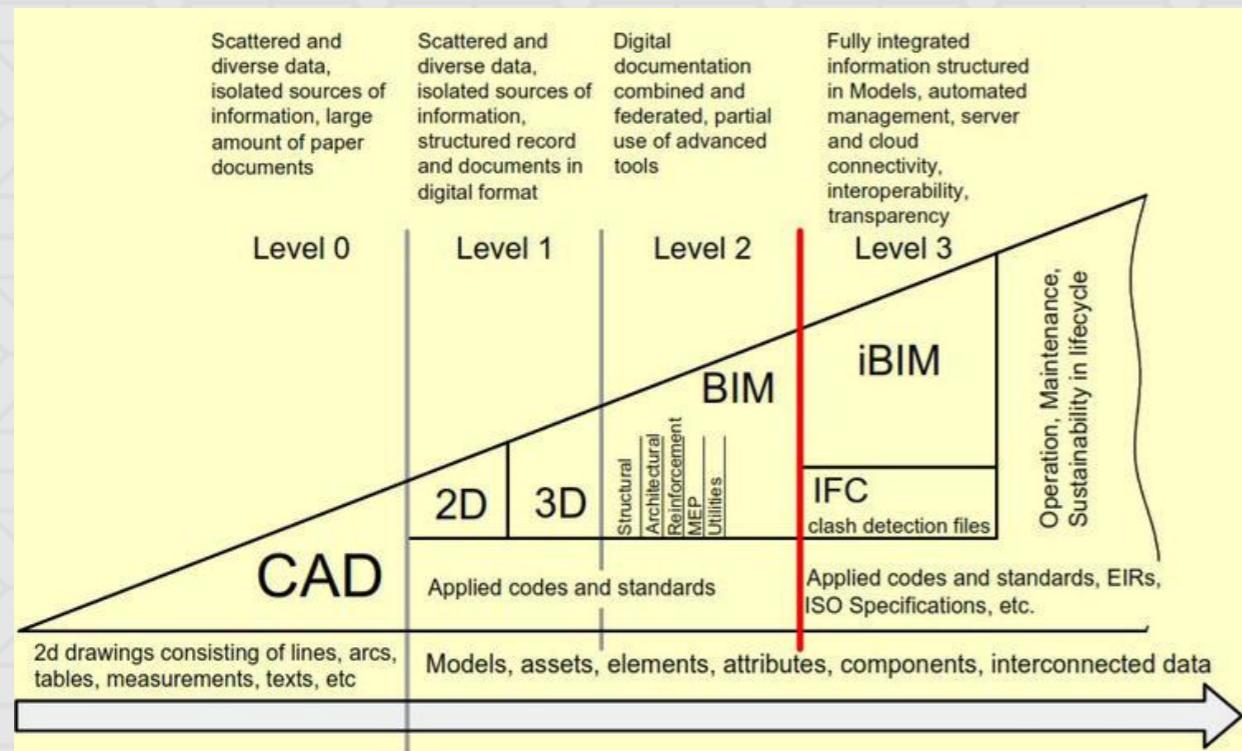
Why ARCEEN BIM Solutions?

SAVE TIME, COST, EFFORT

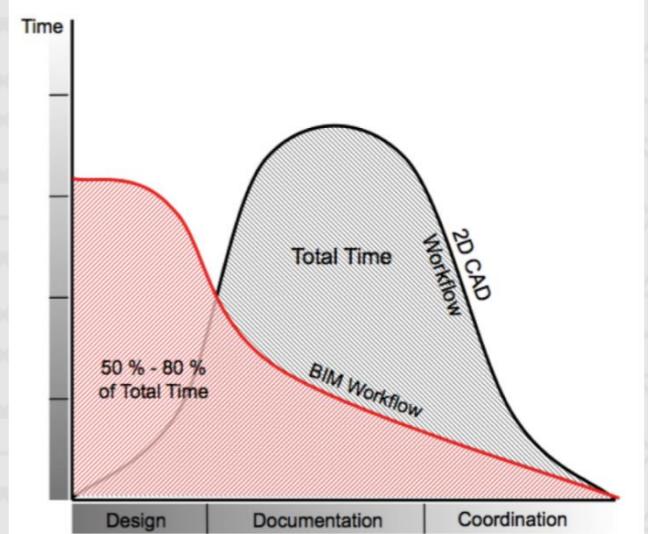
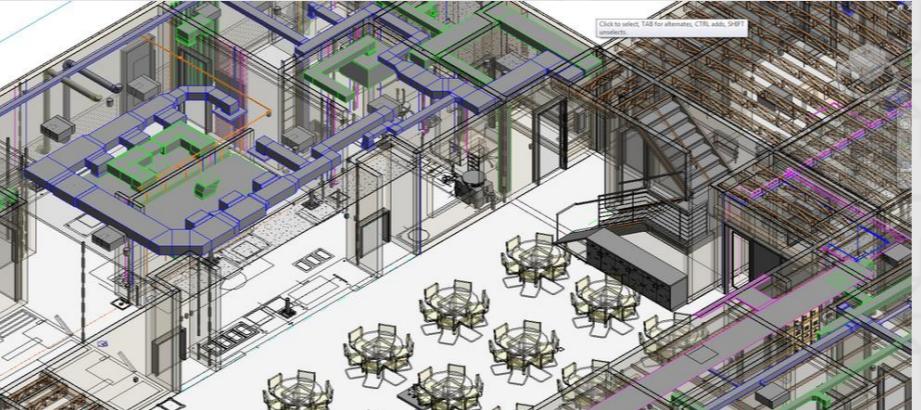
More Efficiency - Accuracy

Why we use BIM ?

- 41% Reduce for Human resources
- 58% More accuracy in Coordination
- 46% More accuracy in Takeoff
- 34% Better in Design and Understanding
- Save about 50% for Printing Sketches cost
- 40% Better for Construction Scheduling phase
- 25% for Quality and Presentations
- Save Time Front End Design Phase more than 35%



One Click = Tons of Information

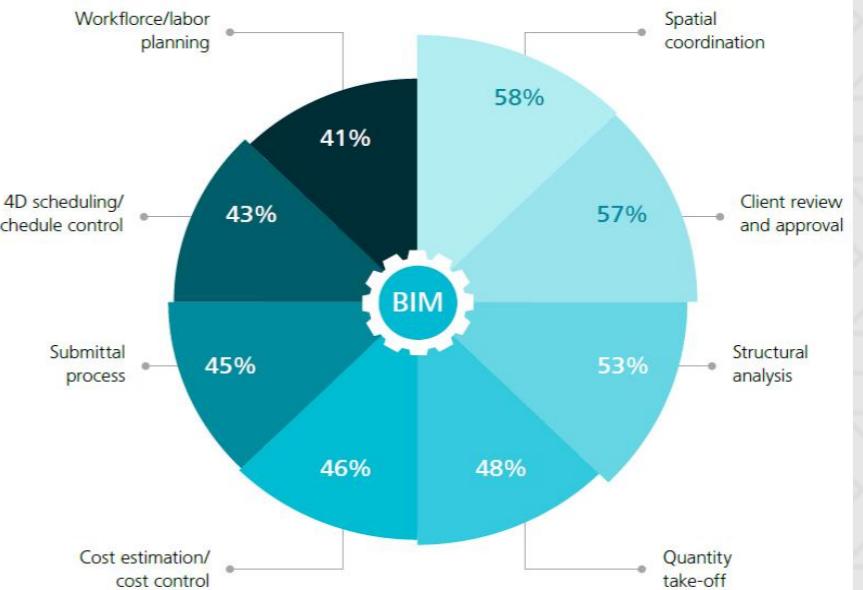


Benefits of BIM

The majority (87%) of BIM users in the study report that they are receiving positive value from their use of BIM. Most believe that they have only just begun to experience the full potential.

- 34% — Fewer errors
- 22% — Greater cost predictability
- 21% — Better understanding
- 16% — Improved schedule
- 8% — Optimized design

Highest Value Project Activities





ARCEEN BIM Department

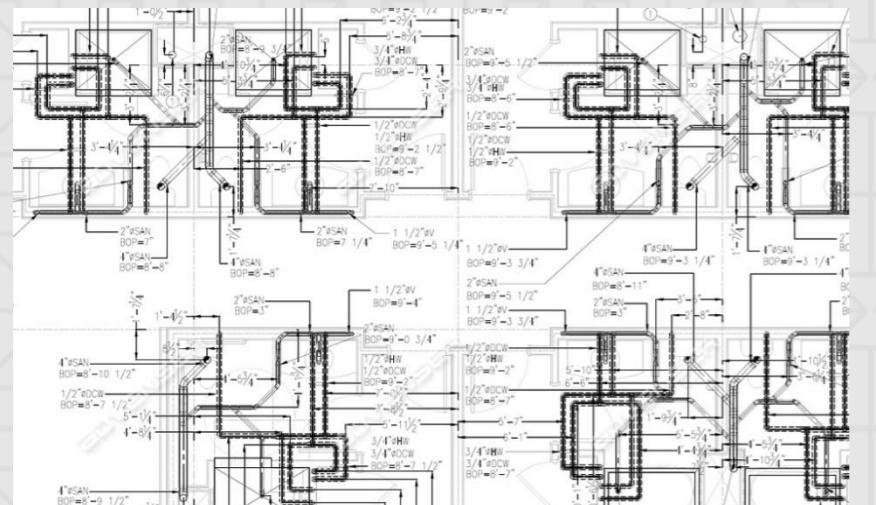
BIM / CAD SHOP & FABRICATION DRAWING UNIT

ARCEEN is a leading BIM and CAD service provider offering a complete spectrum of top-notch shop drawings globally. We cater to the needs and specifications of our clients in compliance with industry standards. Our adept team of engineers, detailers, draftsmen, and software technicians generate highly precise and accurate set of shop drawings embracing the latest technology in short turnaround time.

The shop drawings generated by our team prove to be beneficial for architects, contractors, sub-contractors, fabricators, manufacturers, suppliers, owners, and developers during various stages of the project. Over the years we have worked alongside our clients in more than 30 countries, successfully handling projects of varying complexity and size. Our extensive experience in dealing with residential, commercial, industrial, institutional, government, and infrastructural projects make us a one-stop solution for all of your shop & fabrication drawing needs.

ARCEEN has a dedicated team of 50+ steel detailers, experienced Project Managers, QC Head, Team Leads, and Project Leads for structural steel detailing work. All the team members are trained on international standards.

Our steel detailers are well versed in using the latest versions of the software, which includes Tekla Structures, Autodesk Revit, AutoCAD, and Advance Steel. For complex projects, our steel detailers come with unique solutions which help the engineers to effectively manage the design and the fabricators to carry out the manufacturing process.



Mechanical Shop Drawing

ARCEEN has extensive expertise and experience in providing assembly, casting, machining, and sheet metal drawings to manufacturers, engineers, fabricators and consultants

Electrical Shop Drawing

We provide exact dimensions of electrical equipment, accurate layout details to make installations run smoothly.

Plumbing Shop Drawing

Our 3D MEP coordination services help to detect and resolve discrepancies and clashes between various mechanical systems.

HVAC Duct Shop Drawing

Ducting shop drawings provide the mechanical contractors and fabricators with detailed information on how the ducts and equipment are placed in the building.

Piping Shop Drawing

Our services cover standalone piping shops as well as coordinated MEP shop drawings, integrating architectural, structural, plumbing and electrical systems.

Mechanical Room Modeling

We provide mechanical modeling services to MEP/ HVAC consultants, fabricators and manufacturers for Commercial and industrial sectors around the globe.

MEP BIM Coordination

MEP BIM Coordination Services include HVAC BIM, Piping BIM, and Plumbing BIM Coordination Services for Mechanical, HVAC, Electrical & Plumbing Contractors/ Engineers.

MEP 3D Modeling

We provide MEP 3D Modeling, MEP BIM and detailed construction documents to retailers, homeowners, architects and general contractors.

Parametric Modeling

Parametric modeling refers to the modeling task in which the shape of model geometry can be changed by modifying the values of attributes which are interlinked



ARCEEN BIM Department

BIM (BEP) – BIM Execution Plan

BIM Execution Plan is a living document that will continue to mature over the course of project deliverable and milestones.

The National Building Information Modeling Standard- United States (most current version at contract award) shall be used as the basis of **ARCEEN**

The BIM protocols, roles and responsibilities customized for the needs of each project requiring BIM will be addressed in **ARCEEN** of the Design & BIM Teams. No more than thirty (30) days after the contract is awarded, a project-specific shall be developed.

ARCEEN will review the BEP and make comments and suggestions. The Design & BIM Teams will then have two (2) weeks to incorporate and adopt said changes.

The Owner and Contractor must each submit a Comments that includes roles and responsibilities of the teams demonstrating a high level of project integration and process workflow.

The BEP shall be developed jointly with both Owner and Contractor when feasible and as early on in the project as possible.

Upon Contractor or CM selection a Joint BIM Project Execution Plan must be created and will become the final BEP.

All parties including the Architect, Engineers, Contractors, Trades, Owner and any Consultants affected by its content must agree with signature to the BEP and will be held accountable for its content and execution.

At a minimum the **BEP** should address the following:

- BIM Project Execution Plan Overview
- Project Information
- Key Project Contact
- Project Goals / BIM Uses
- Organizational Roles / Staffing
- BIM Process Design
- BIM Information Exchanges
- BIM and Facility Data Requirements
- Collaboration Procedures
- Quality Control
- Technological Infrastructure Needs
- Model Structure
- Project Deliverables
- Delivery Strategy / Contract



ARCEEN BIM Department

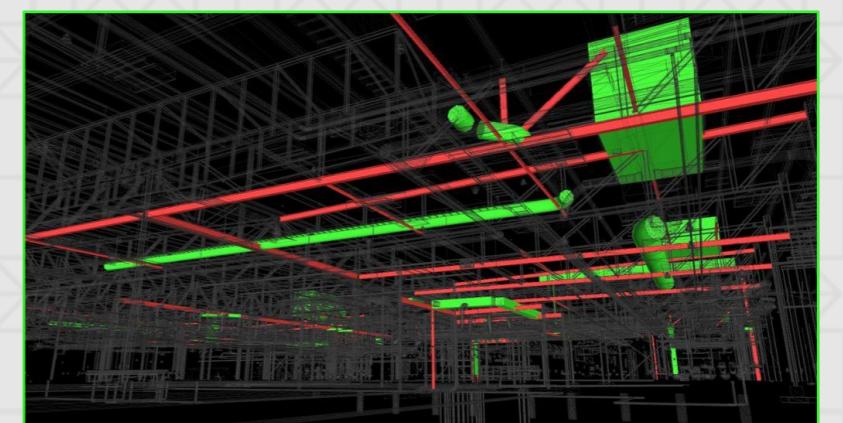
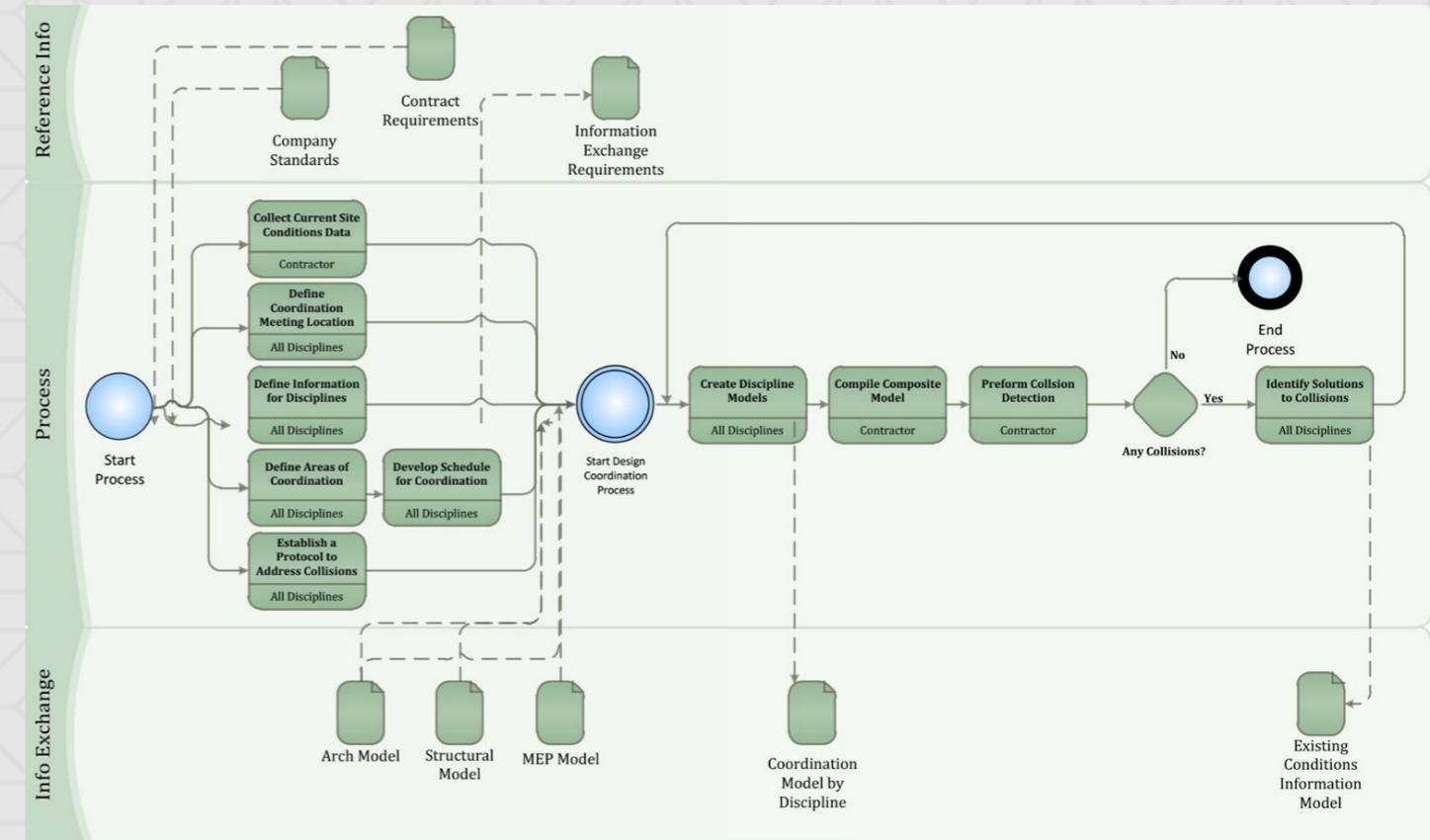
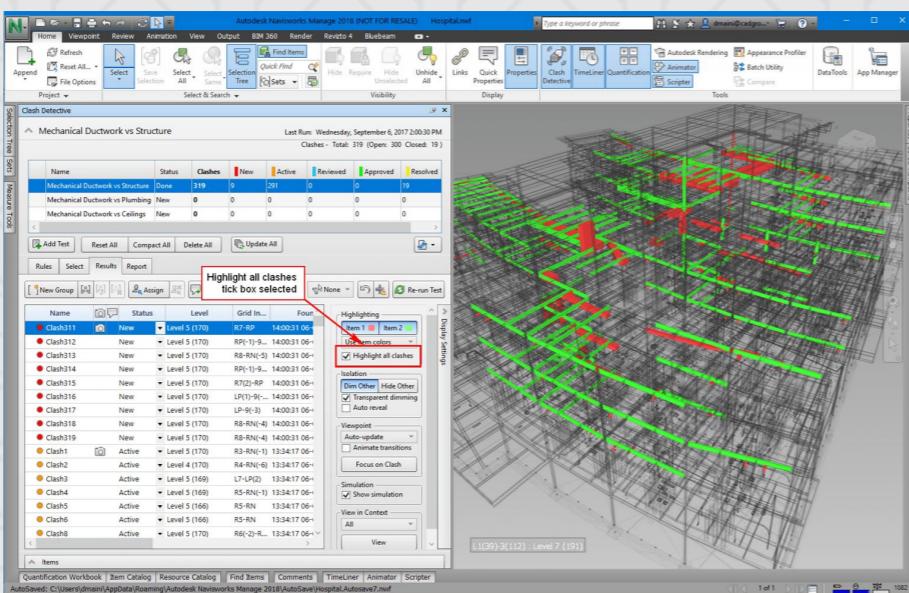
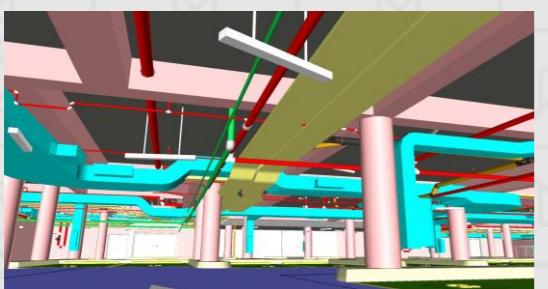
BIM Design Coordination

- 4D = 3D + TIME SCHEDULE
- 4D BIM adds an extra dimension of information to a project information model in the form of scheduling data. This data is added to components which will build in detail as the project progresses. This information can be used to obtain accurate programmed information and visualizations showing how your project will develop sequentially.
- Activity Planning in 4D, 4D Scheduling / Construction Sequencing. ... These animated models represent the planned construction sequence set against time. The main purpose of a construction phasing simulation is to provide a tool that will help the construction team visualize logistical issues or inefficiencies.

Benefits

Integrating BIM with 4D CAD simulation models bring benefits to participants in terms of planning optimization.

Builders and manufacturers can optimize their construction activities and team coordination





ARCEEN BIM Department

BIM LOD Definition

The AIA describes the concept of LOD as an identification of the "...specific minimum content requirements and associated Authorized Uses for each Model Element at [six] progressively detailed levels of completeness."

Following are the Fundamental LOD Definitions:

- **LOD 100 – Conceptual**

"The Model Element may be graphically represented in the Model with a symbol or other generic representation, but does not satisfy the requirements for LOD 200. Information related to the Model Element (i.e. cost per square foot, tonnage of HVAC, etc.) can be derived from other Model Elements."

- **LOD 200 – Generic Placeholders**

"The Model Element is graphically represented within the Model as a generic system, object, or assembly with approximate quantities, size, shape, location, and orientation. Non-graphic information may also be attached to the Model Element."

- **LOD 300 – Specific Assemblies**

"The Model Element is graphically represented within the Model as a specific system, object or assembly in terms of quantity, size, shape, location, and orientation. Non-graphic information may also be attached to the Model element."

- **LOD 350 – Hybrid of Specific & Detailed Assemblies**

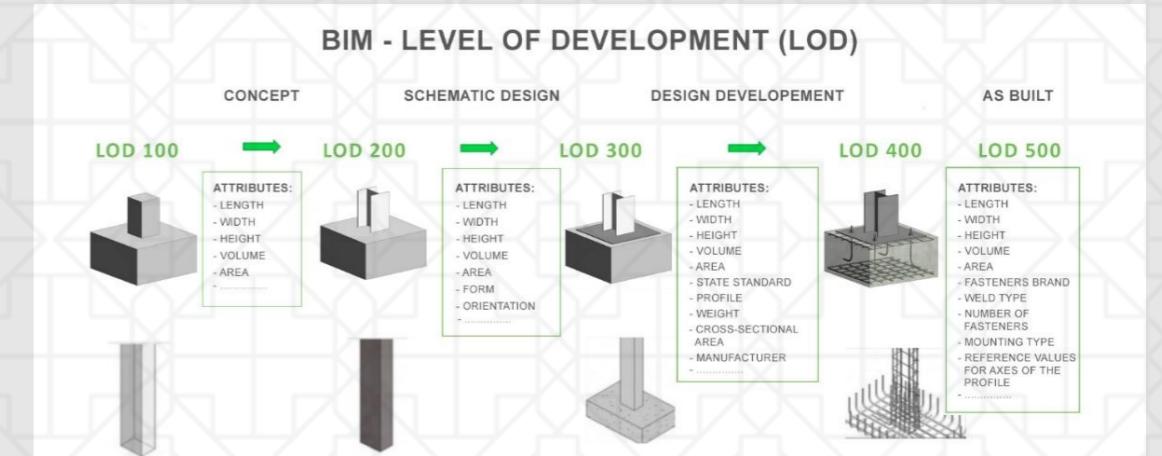
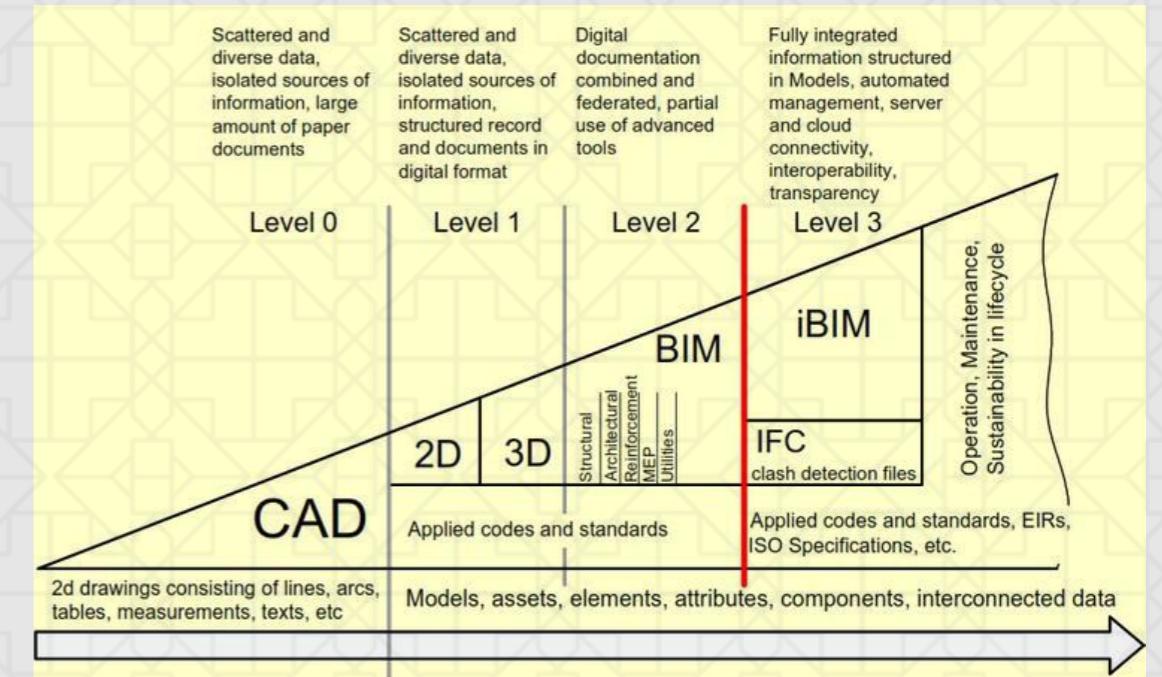
"The Model Element is graphically represented within the Model as a specific system, object or assembly in terms of size, shape, location, orientation and interfaces with other building systems. Non-graphic information may also be attached to the Model Element."

- **LOD 400 – Detailed Assemblies**

"The Model Element is graphically represented within the Model as a specific system, object or assembly in terms of size, shape, location, quantity, and orientation with detailing, fabrication assembly, and installation information. Non-graphic information may also be attached to the Model Element."

- **LOD 500 – As-Built**

"The Model Element is a field-verified representation in terms of size, shape, location, quantity, and orientation. Non-graphic information may also be attached to the Model Elements."

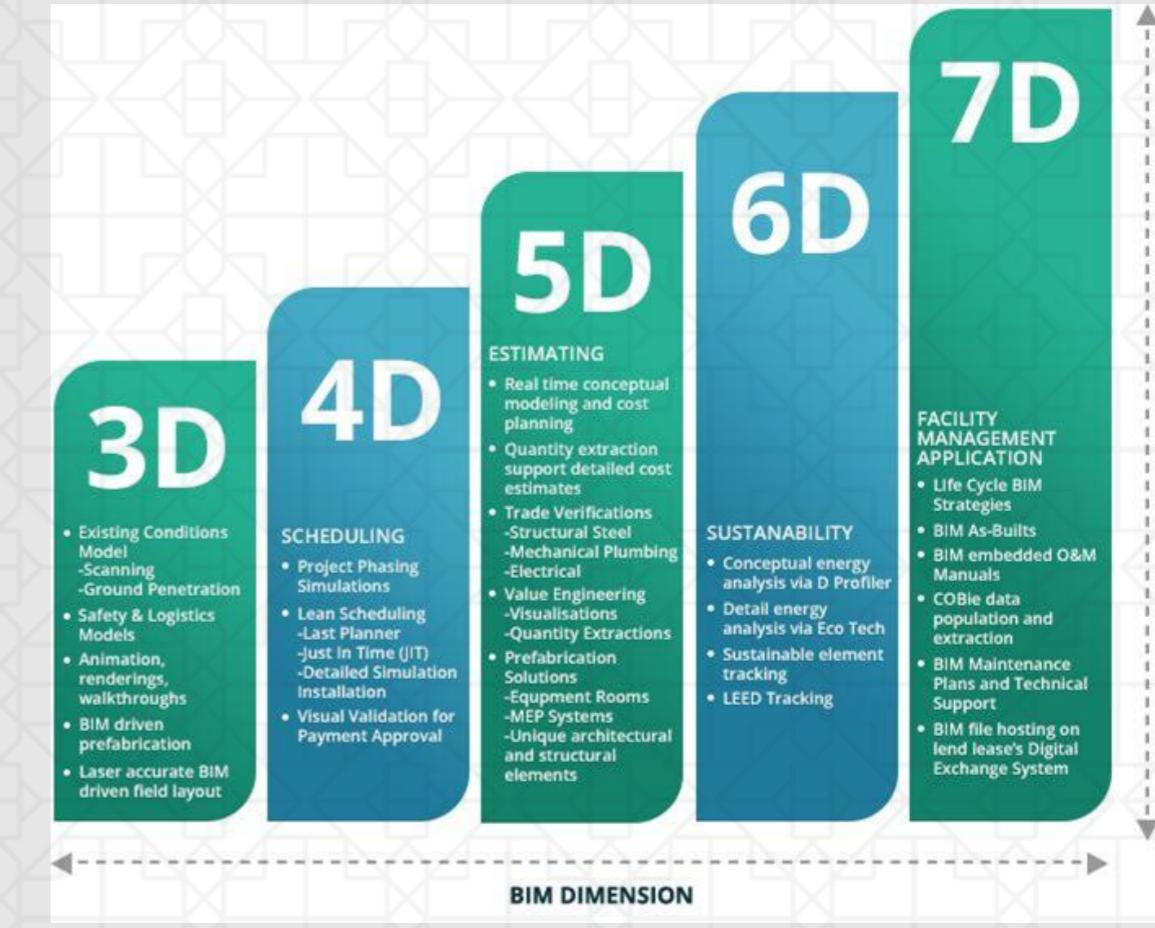




ARCEEN BIM – Building Information Modeling – is a process that involves creating and using an intelligent 3D model to inform and communicate project decisions. It has various components:

- 2D 2-Dimensional view
- 3D 3-Dimensional Model
- 4D + Time Schedule
- 5D + Budget (Cost)
- 6D + Facilities management (Maintenance)
- 7D + Sustainability (Life Cycle)
- 8D + Occupational safety and health (Not Applicable)

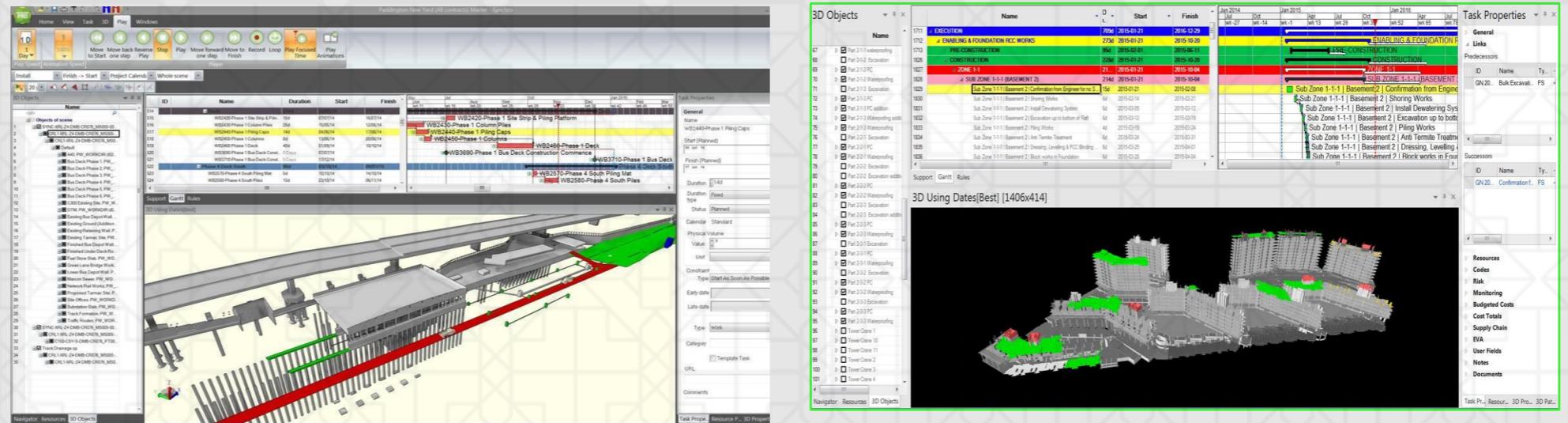
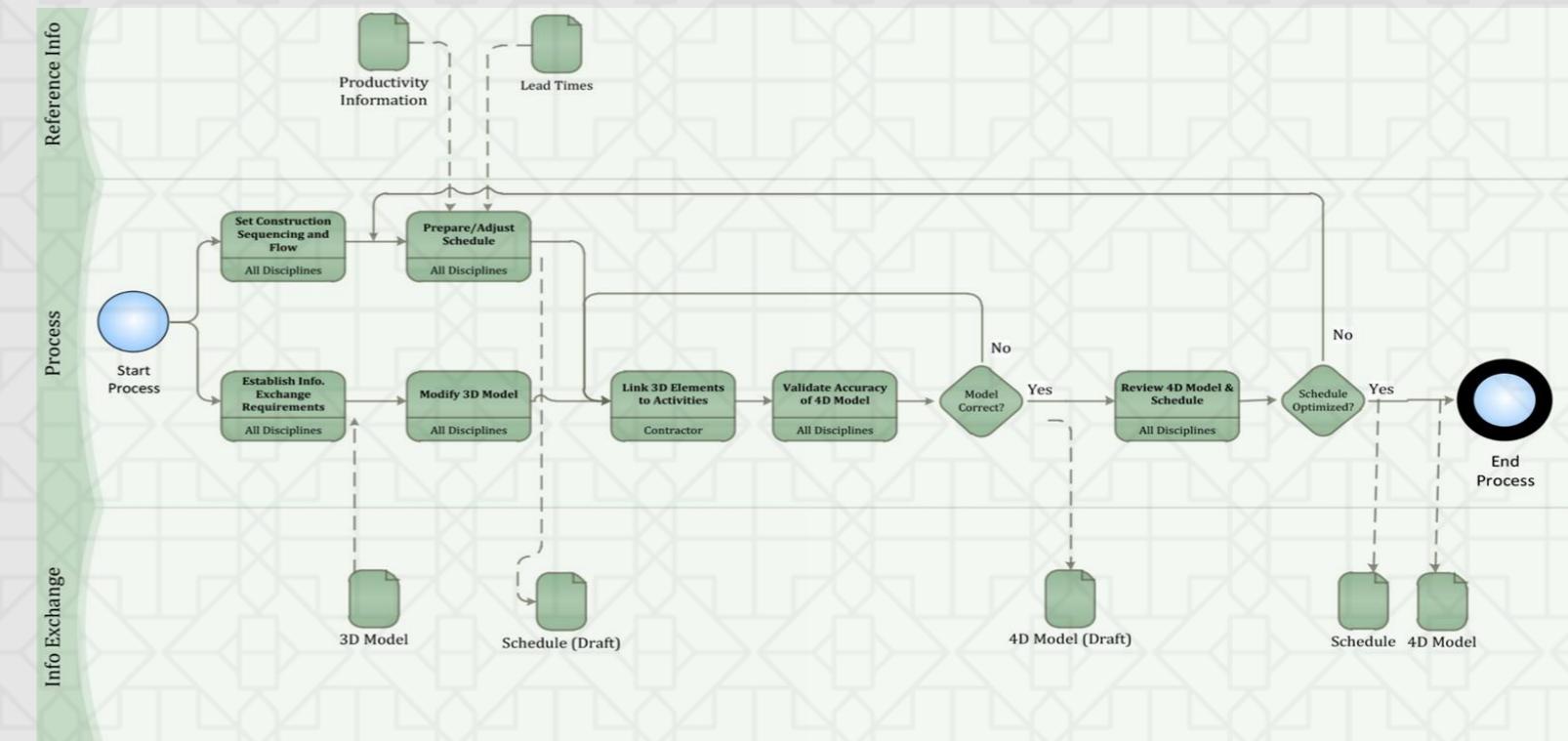
BIM Uses	Asset Management	Design Management	Resources (Time/cost)	Sustainability / Environment	Communication / Information Production
3D design coordination	✓	✓	✓	✓	✓
Asset management	✓			✓	✓
Assurance and data validation	✓	✓	✓	✓	✓
Bespoke BIM object library authoring	✓	✓			✓
Building systems analysis		✓	✓	✓	
Cost estimation and management	✓	✓	✓	✓	✓
Data classification	✓	✓	✓	✓	✓
Design (BIM) authoring	✓	✓	✓	✓	✓
Digital fabrication		✓	✓	✓	
Disaster planning	✓				✓
Drawing generation	✓	✓	✓	✓	✓
Energy analysis		✓	✓	✓	
Existing and record modelling		✓		✓	✓
Field management tracking	✓	✓	✓		✓
Lighting analysis		✓	✓	✓	
Pedestrian simulation for hazard and dwell time	✓	✓			✓
Planned maintenance	✓		✓		
Planning, sequencing and simulation		✓	✓		✓
Possessions and permit to work		✓	✓		✓
Reviews	✓	✓	✓	✓	✓
Site analysis		✓	✓	✓	
Spatial optimisation, management and tracking	✓	✓			✓
Structural analysis		✓	✓	✓	
Sustainability evaluation	✓	✓	✓	✓	
Visualisation and communication	✓	✓			✓



ARCEEN BIM Department

4D Scheduling Modeling Process

- **4D = 3D + TIME SCHEDULE**
- 4D BIM adds an extra dimension of information to a project information model in the form of scheduling data. This data is added to components which will build in detail as the project progresses. This information can be used to obtain accurate programmed information and visualizations showing how your project will develop sequentially.
- Activity Planning in 4D, 4D Scheduling / Construction Sequencing. ... These animated models represent the planned construction sequence set against time. The main purpose of a construction phasing simulation is to provide a tool that will help the construction team visualize logistical issues or inefficiencies.
- Benefits
Integrating BIM with 4D CAD simulation models bring benefits to participants in terms of planning optimization.
Builders and manufacturers can optimize their construction activities and team coordination





ARCEEN BIM Department

BIM 6D – 7D – 8D Simulation

6D Simulation:

- 6D BIM – Project lifecycle information
- 6D = 3D + TIME SCHEDULE + COST + INTELLEGENT LINKING
- Operations and Maintenance in 6D and
- 6D BIM stands for 6D Building Information Modeling. It is a phrase extensively used in the AEC industry and refers to the intellectual linking of all the individual 3D CAD components or assemblies with all aspects of project life-cycle management information
- Benefits
Integrating BIM with 6D CAD simulation models leads to an overall reduction in energy consumption.

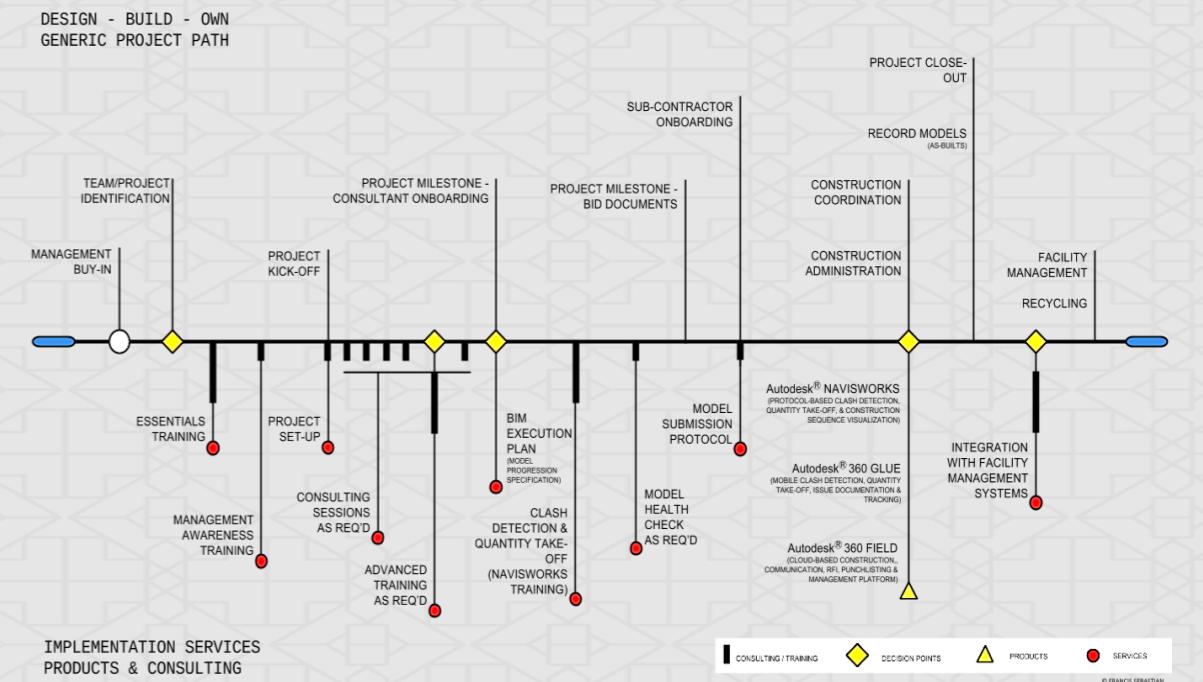
6D Simulation:

A Conceptual Framework for BIM-based Sustainability Analysis

A conceptual framework for BIM based sustainability analysis during different stages of a project life cycle (or project phases) is illustrated in Figure 6. The left hand side box indicates the various project phases (or construction company departments). The middle box depicts the various sustainability analysis features while the right hand side box indicates the interaction of external stakeholders (such as customers or project partners) in sustainability analysis. This framework can be used by the construction companies who want to perform BIM-based sustainability analysis. Please note that this conceptual framework is still in its infancy stage. As this is an on-going research project, it is hoped that this framework will be further refined and validated.

7D Simulation:

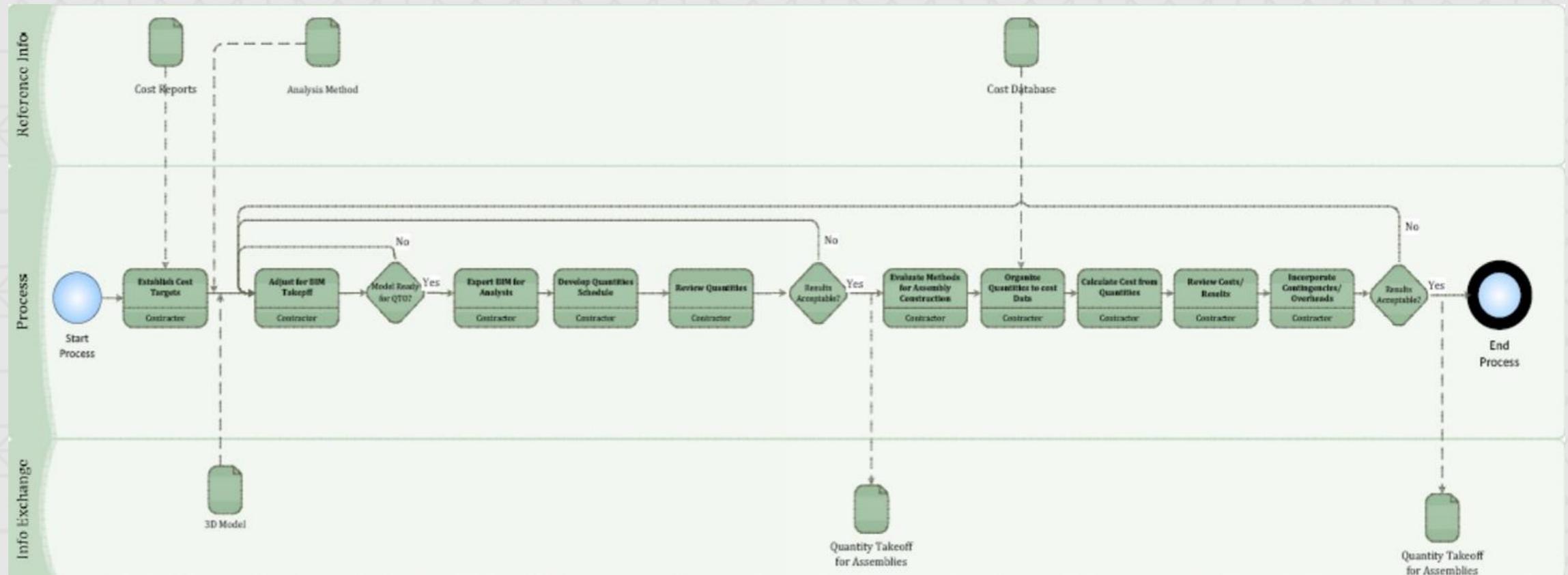
- 7D BIM – Sustainability
- 7D = 3D + TIME SCHEDULE + COST + INTELLEGENT LINKING + SUSTAINABILITY
- 7D-BIM (seventh-dimensional building information modelling) is used by managers in the operation and maintenance of the facility throughout its life cycle. ...
Integrating BIM with 7D CAD simulation models optimizes asset management from design to demolition.
- Benefits
Integrating BIM with 7D CAD simulation models optimizes asset management from design to demolition.



ARCEEN BIM Department

5D Modeling Process

- 5D = 3D + TIME SCHEDULE + COST.
- 5D BIM, an acronym for 5-dimensional building information modelling, is a term used in the CAD and construction industries, and refers to the intelligent linking of individual 3D CAD components or assemblies with time schedule (4D BIM) constraints and then with cost-related information.
- Drawing on the components of the information model being able to extract accurate cost information is what's at the heart of 5D BIM.
- Project Management in 5D, Project controlling in 5D In 5D schedules and costs are linked to the 3D models.
- Benefits
Integrating BIM with 5D CAD simulation models enables the development of more efficient, cost-effective and sustainable constructions.



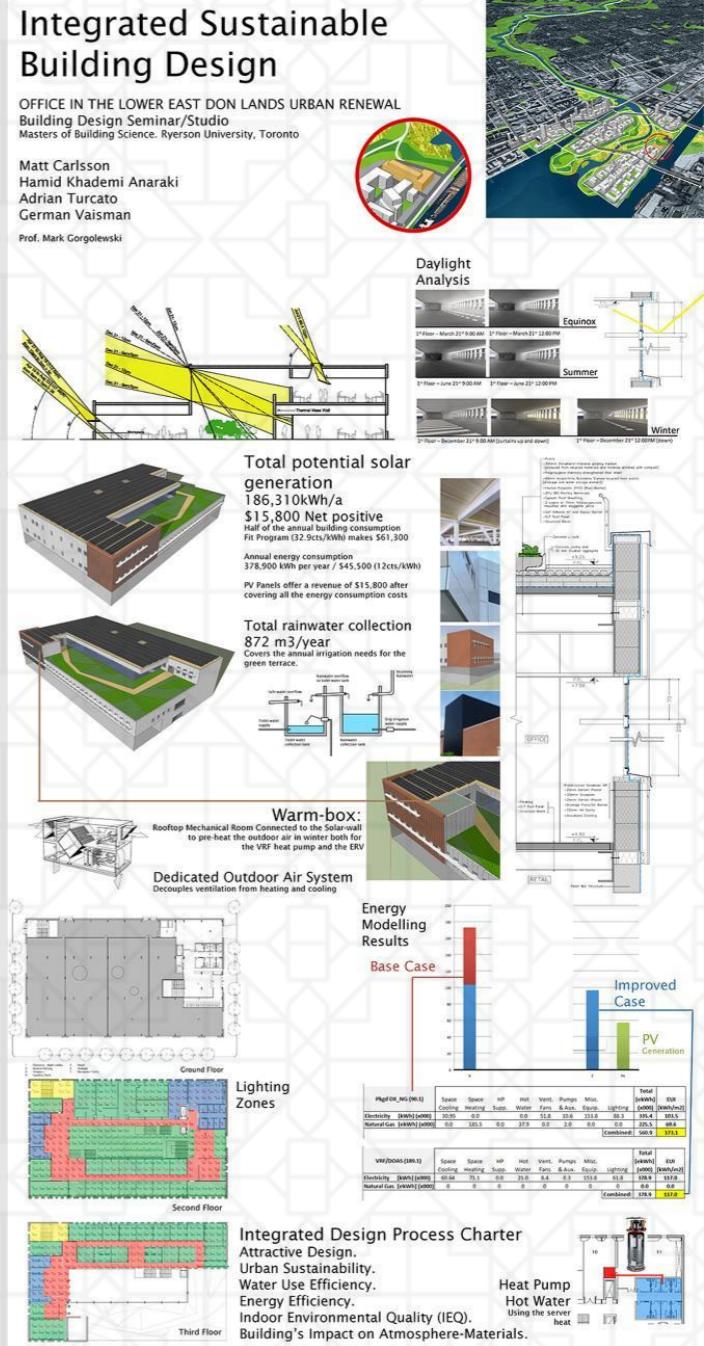
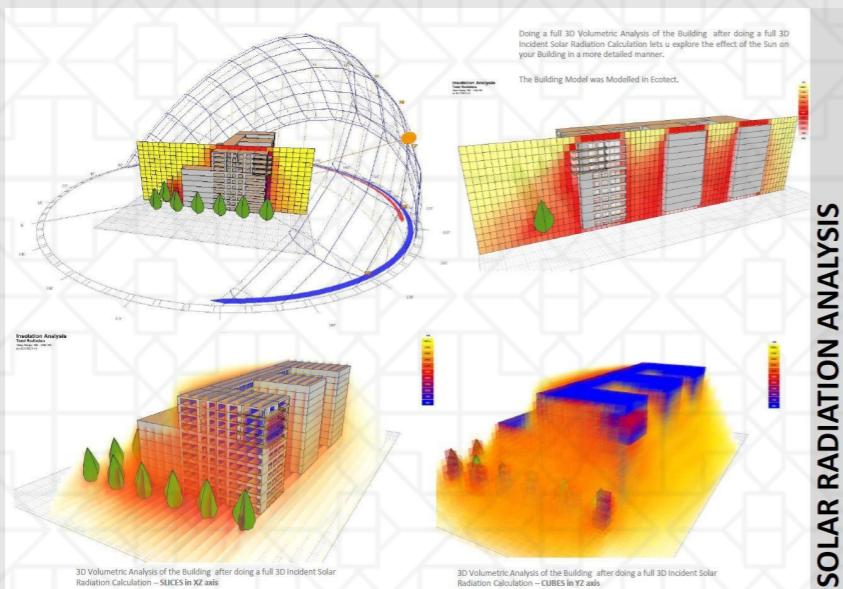


ARCEEN BIM Department

6D Sustainability Design & Modeling

The sixth dimension of BIM is used for energy assessment during the design phase and operational phase. An efficient data collection from installed sensors enables to better understand the building's performance and define a strategy aiming to optimize the building's energy consumption.

6D BIM is considered by some to be adding sustainability information to the information set. As with 6D BIM, be sure to carefully define the specific information required in terms of data types, scope, units, rules of measure, etc.



ARCEEN BIM Department

7D Lifecycle of the facility Management



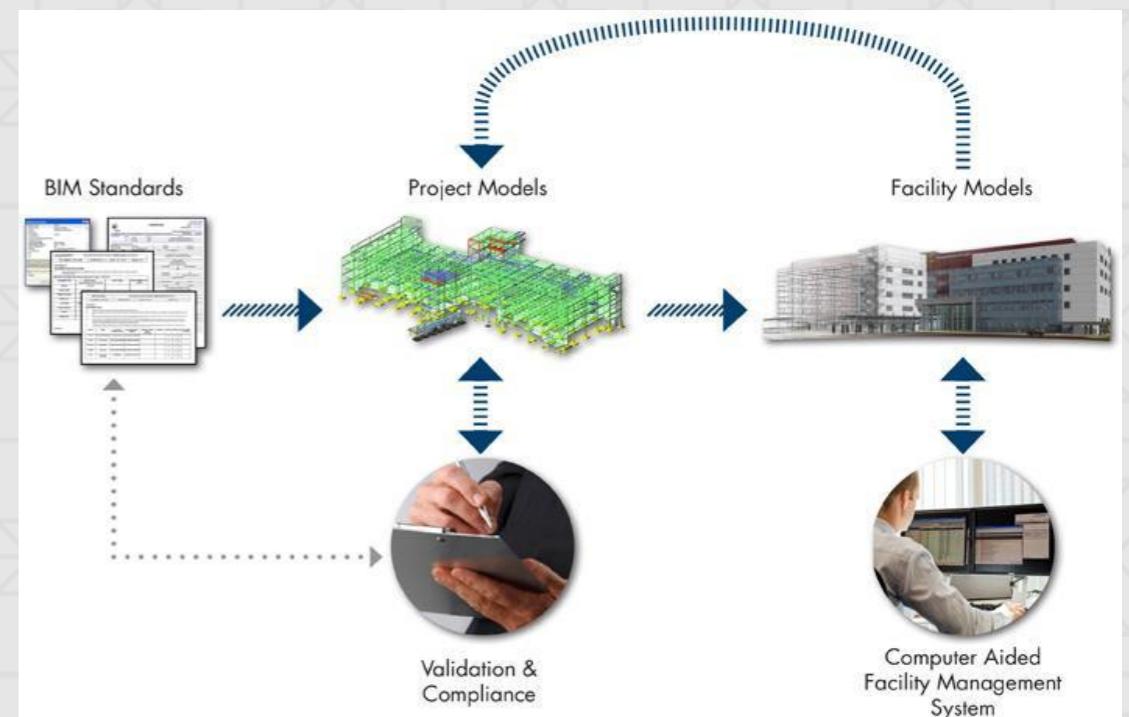
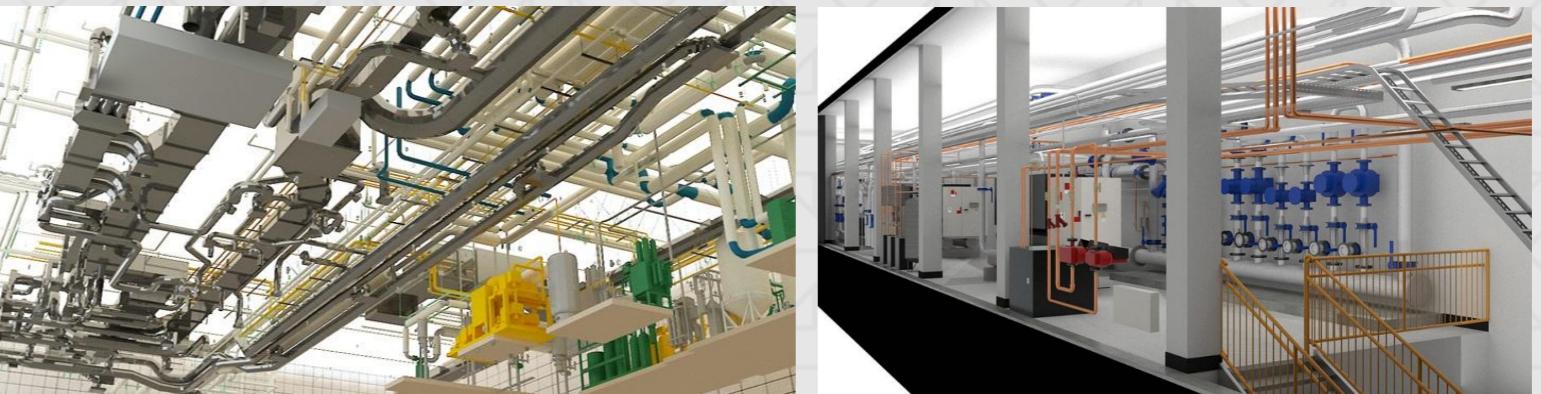
ARCEEN BIM allows FMs to take informed decisions through the whole lifecycle of the facility around areas such as space use, floor planning, equipment and asset maintenance, energy consumption, and cost efficiencies.

Facilities management can be defined as the tools and services that support the functionality, safety, and sustainability of buildings, grounds, infrastructure, and real estate. Facilities management includes: Lease management, including lease administration and accounting. Capital project planning and management.

The results of BIM for facility managers are undeniable. Researchers have spent decades developing BIM to aid building managers as they seek to reduce costs, improve building ROI, streamline operations, improve employee engagement, and prevent problems from arising. Here are some of the ways, specifically, that BIM benefits facilities managers on a day-to-day basis.

- Generates cost savings in facilities upkeep, maintenance, and improvements
- Improves project efficiency and expedites delivery time for results
- Reduces safety risks and clashes, which lowers passive change orders
- Offers greater predictability for facilities maintenance and upkeep
- Improves the visibility and oversight of facilities managers in everyday upkeep
- Provides a system of record and visibility for vital systems within the building
- Integrates with facilities management software and systems to automate processes

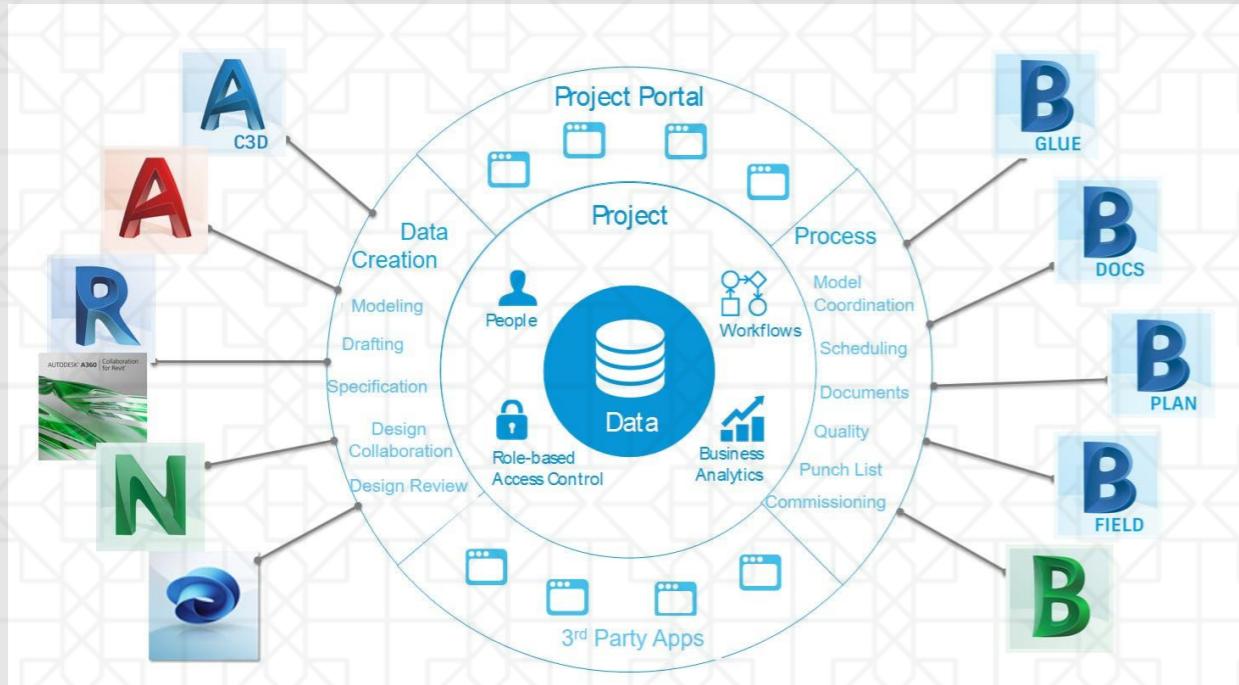
BIM goes beyond facilities management, too. The information and modeling provided by BIM help facilities managers communicate needs and expectations with contractors and craftspeople. BIM facilitates total management of a building across diverse teams. Anyone can glean robust information from the powerful data of a digitized building and its systems to provide better, more efficient, targeted results





ARCEEN BIM Department

BIM Tools





ARCEEN BIM Solutions

Fully Integrated with your Project

BIM Support For Buildings Design Phase:

- BIM BEP (BIM Excision Plan)
- BIM Scope Define
- Data Base Collection & COpies
- BIM Buildings Design for All Disciplines
- BIM LOD's (Level of Developments) up to LOD 300
- LEED Design – Green Buildings Support
 - BIM Simulations with 4D -5D to monitoring Cost + Time impact during Design Phase.
- Energy Modeling
- Solar Analysis
- VR Simulations
- Coordination between all parties and limiting Clashes to save Time & Cost
- Collaborating with (Owners – Designers – Contractors – Stakeholders – End-users) During Design Phase
- Providing all Updating Documents from Concept up to IFC BIM Package
- IFC Modeling with Fully integrated Project Tendering Documents
- Online – Offline Support

BIM Support For Buildings Construction Phase:

- BIM Detailing Modeling
- BIM Detailing Productions for All Disciplines
- LOD 350
- LOD 400
- LOD 500
- Site Modifications Red Marked Implementation on Modeling Realtime
- Site Simulations (AR)
- BIM Simulations with 4D -5D – 6D – 7D.
- Free Of Clashes and Fully Coordination
- Collaborating with (Contractors – Subcontractor's) During Construction Phase
- IFC Updating against As-Built Cad Drawings from Site Team
- Cost + Time Controlling with BIM and Manufactures Specs & Conditions



ARCEEN BIM Solutions

AR – VR Real Time Simulation Services

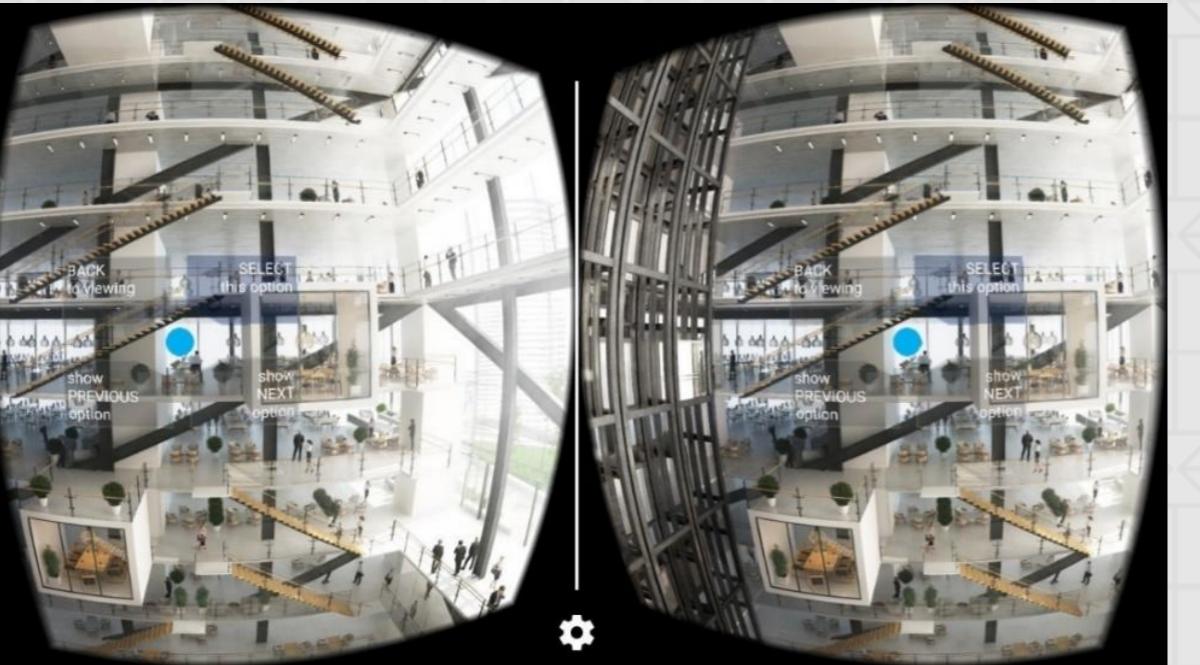


What is laser scanning in BIM?

In a Scan to BIM process, a laser scanner is used to capture an accurate 3D scan of the real world conditions on a project. The scan data is then imported into a 3D modeling environment to create either accurate as-built models or to inform the design with the real world conditions.

“Scan-to-BIM” is the commitment to use 3D laser scanning to create an accurate digital representation of the physical elements of the BIM project. ... For example, on a typical construction project, rework accounts for up to 15% of the cost of construction. With laser scanning, rework can be reduced to 3% or less

Point cloud is a set of data points in a 3D coordinate system representing the external surface of an object or building including its geometry and color. 3D scanners are used to measure Point cloud data as a set of vector points, which are then converted to accurate parametric REVIT models. Once imported into Revit, we can trace around the point data with our Revit families quickly building up a 3D model with the point cloud as a reference. The 3D scanned data captures every single detail, thus eliminating the need for repeated site visit





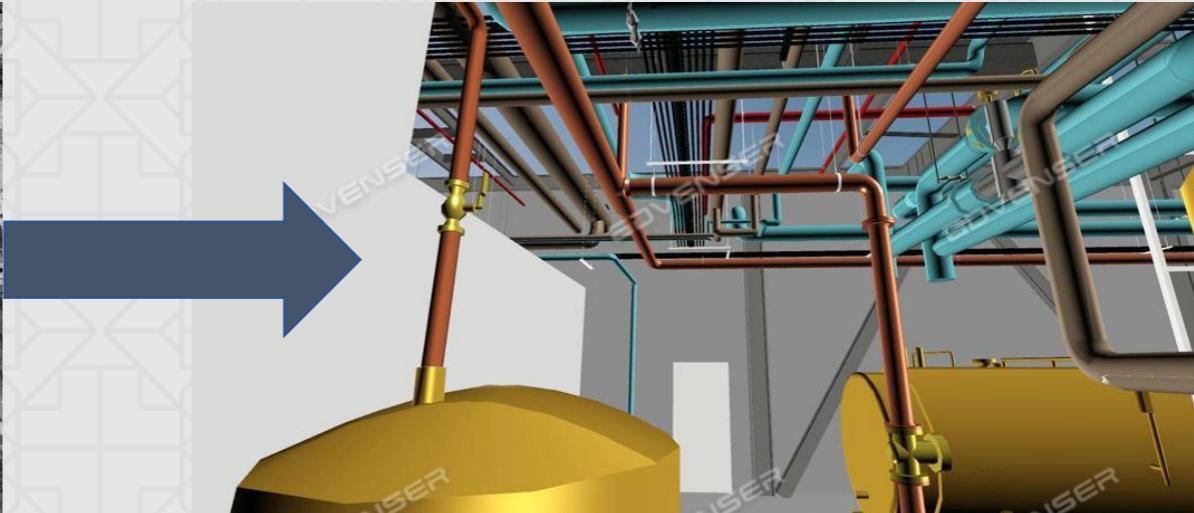
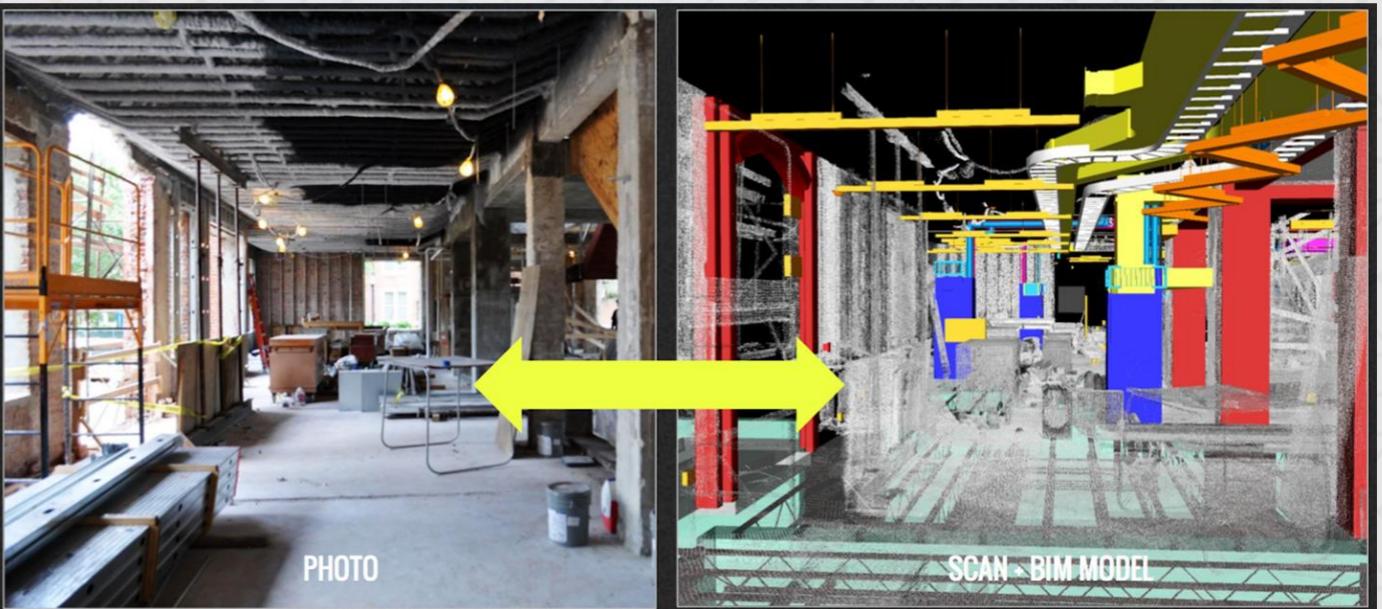
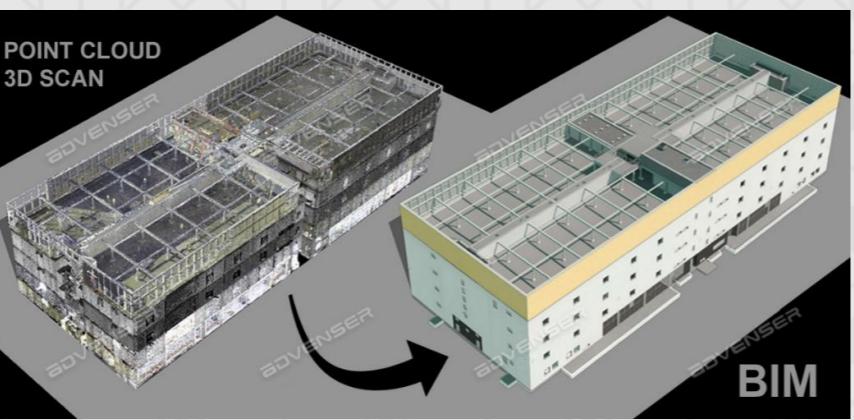
ARCEEN BIM Solutions

Renovations Project

Leaser Scanning - (Point Cloud)

Egypt Local Projects Only

Point cloud is a set of data points in a 3D coordinate system representing the external surface of an object or building including its geometry and color. 3D scanners are used to measure Point cloud data as a set of vector points, which are then converted to accurate parametric REVIT models. Once imported into Revit, we can trace around the point data with our Revit families quickly building up a 3D model with the point cloud as a reference. The 3D scanned data captures every single detail, thus eliminating the need for repeated site visit





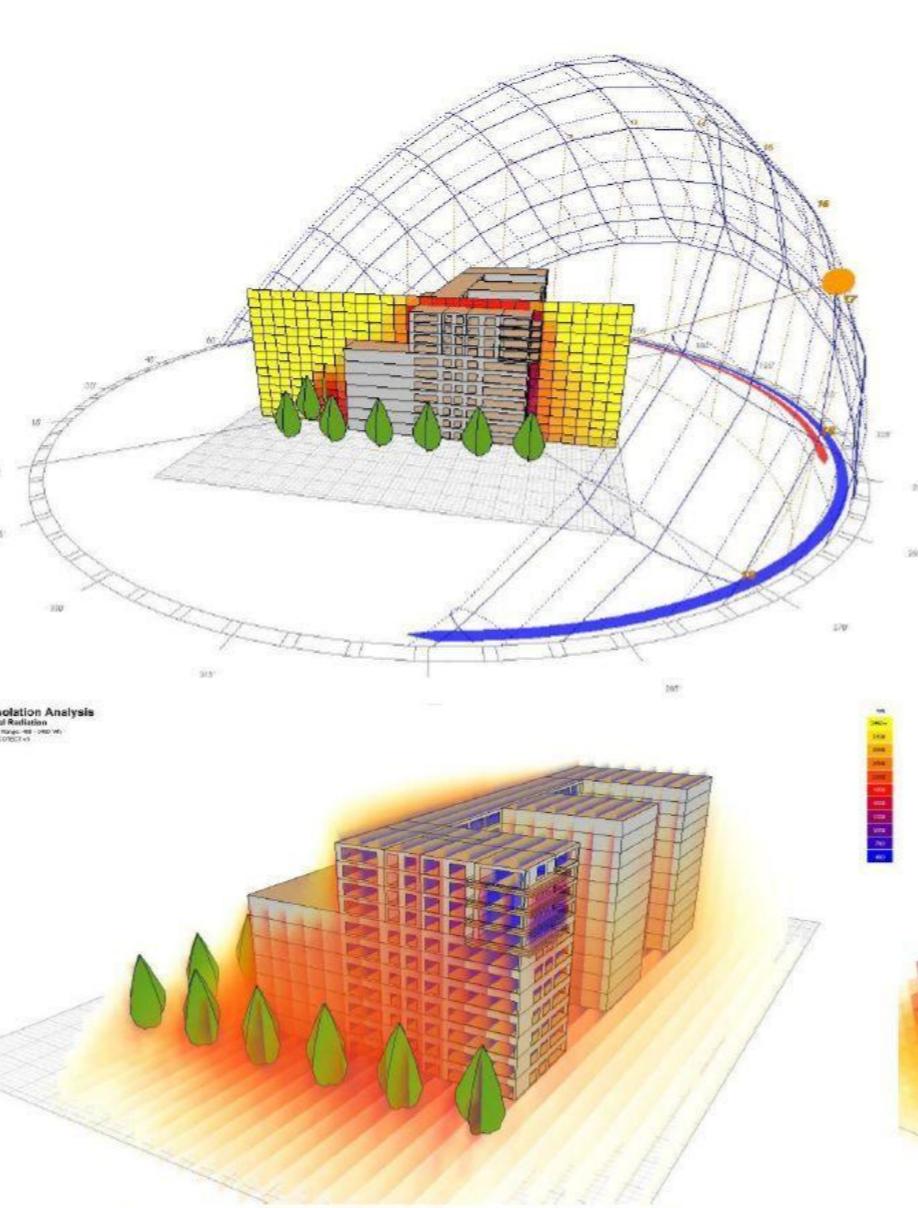
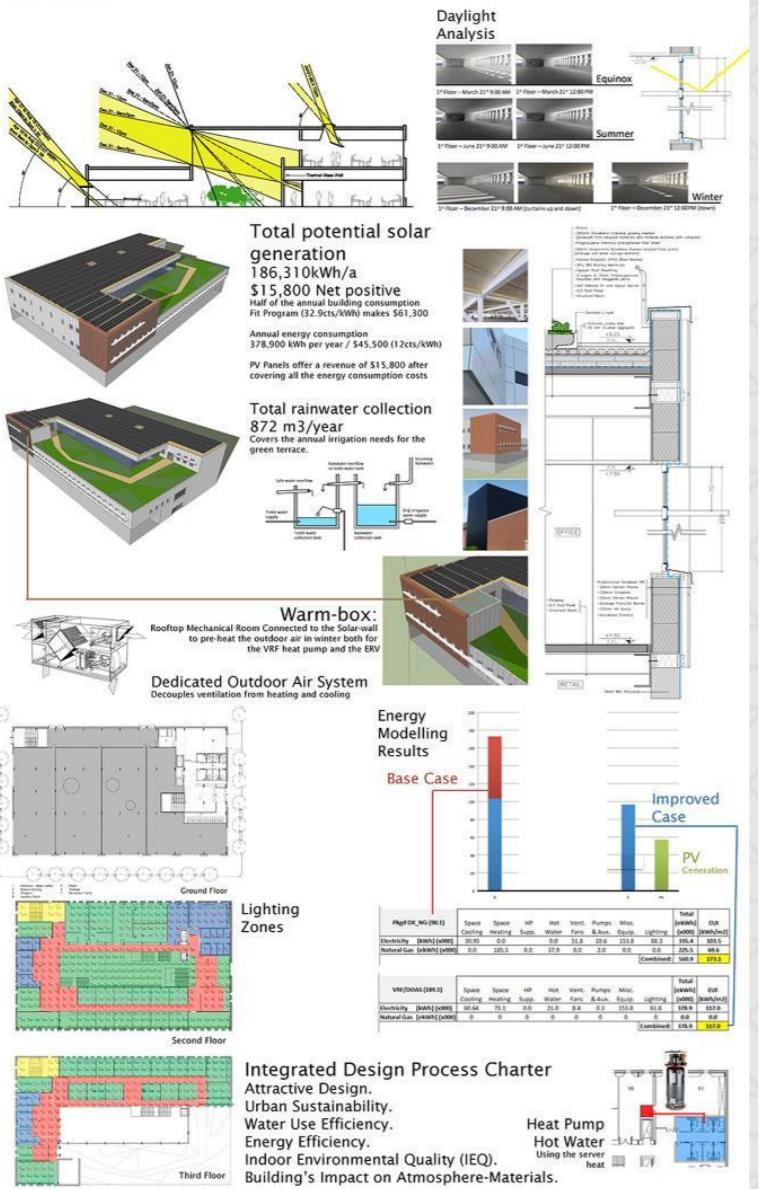
ARCEEN BIM Department

BIM Solar & Sustainable Modeling

Integrated Sustainable Building Design

OFFICE IN THE LOWER EAST DON LANDS URBAN RENEWAL
Building Design Seminar/Studio
Masters of Building Science. Ryerson University, Toronto

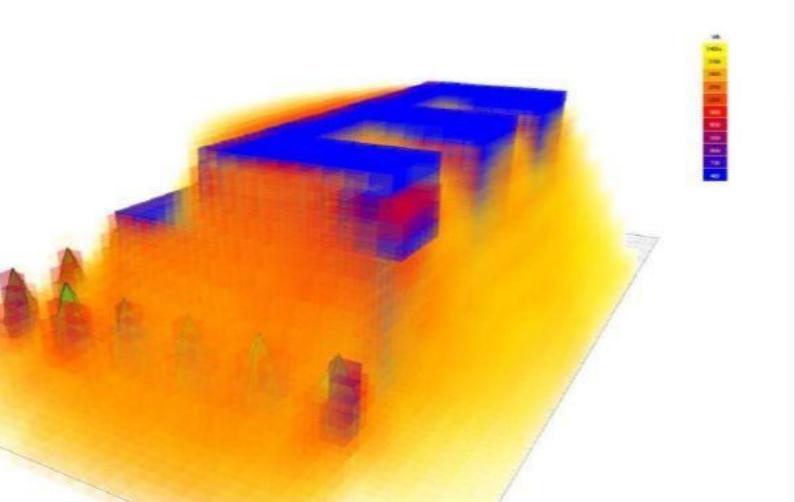
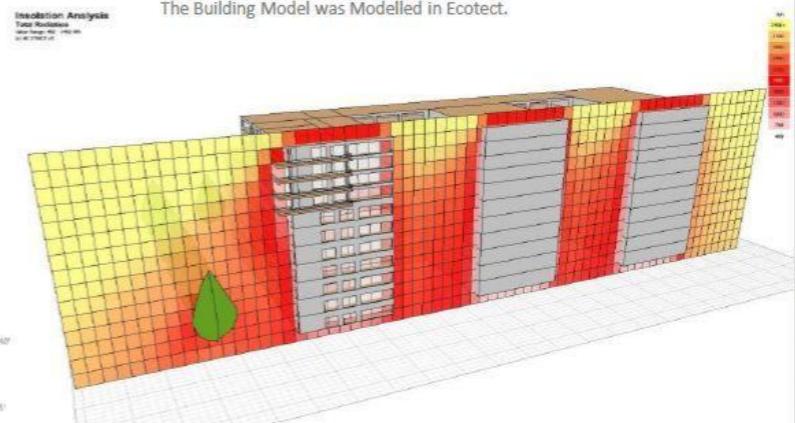
Matt Carlsson
Hamid Khademi Anaraki
Adrian Turcato
German Vaisman
Prof. Mark Gorgolewski



3D Volumetric Analysis of the Building after doing a full 3D Incident Solar Radiation Calculation – SLICES in XZ axis

Doing a full 3D Volumetric Analysis of the Building after doing a full 3D Incident Solar Radiation Calculation lets u explore the effect of the Sun on your Building in a more detailed manner.

The Building Model was Modelled in Ecotect.



3D Volumetric Analysis of the Building after doing a full 3D Incident Solar Radiation Calculation – CUBES in YZ axis

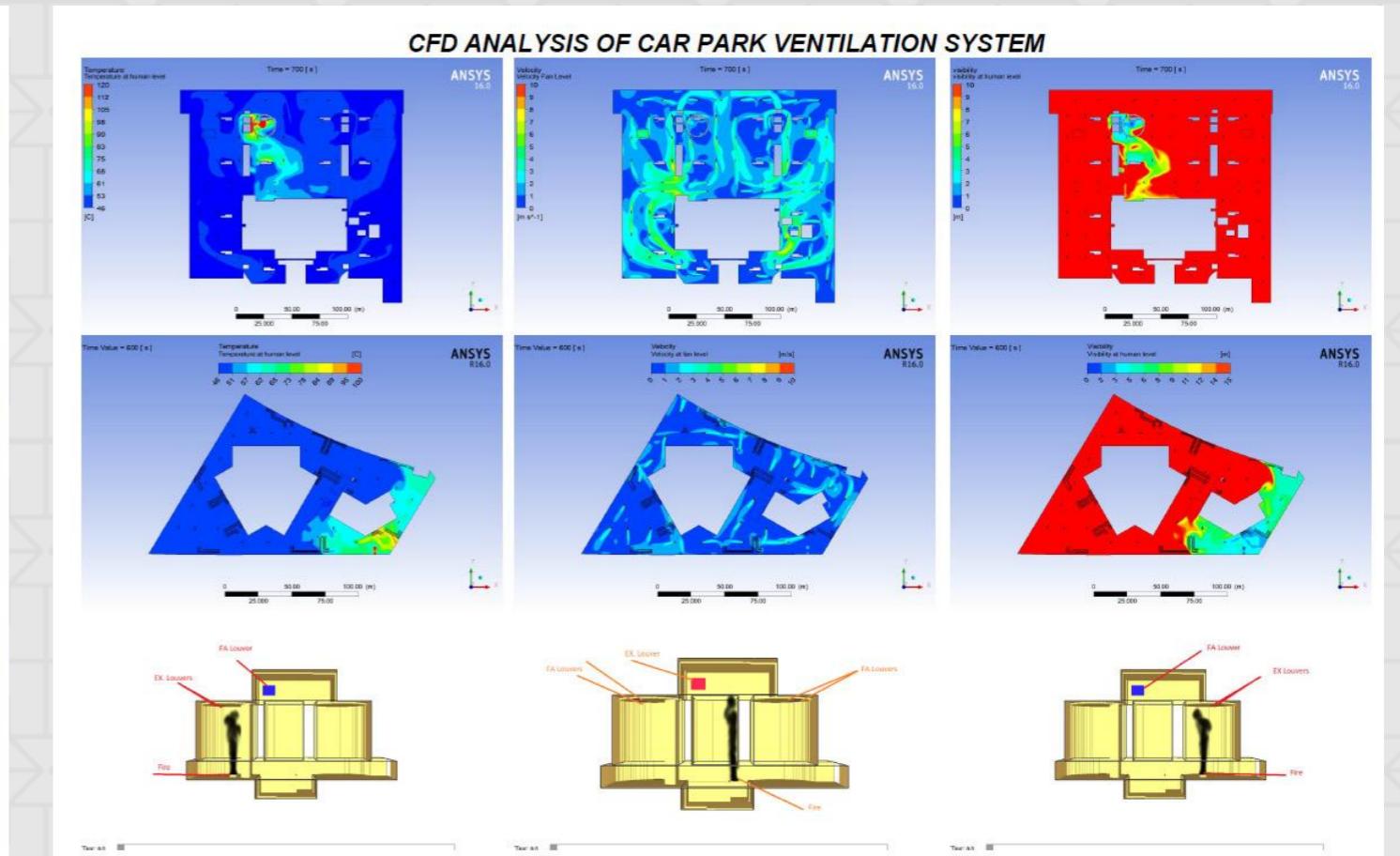
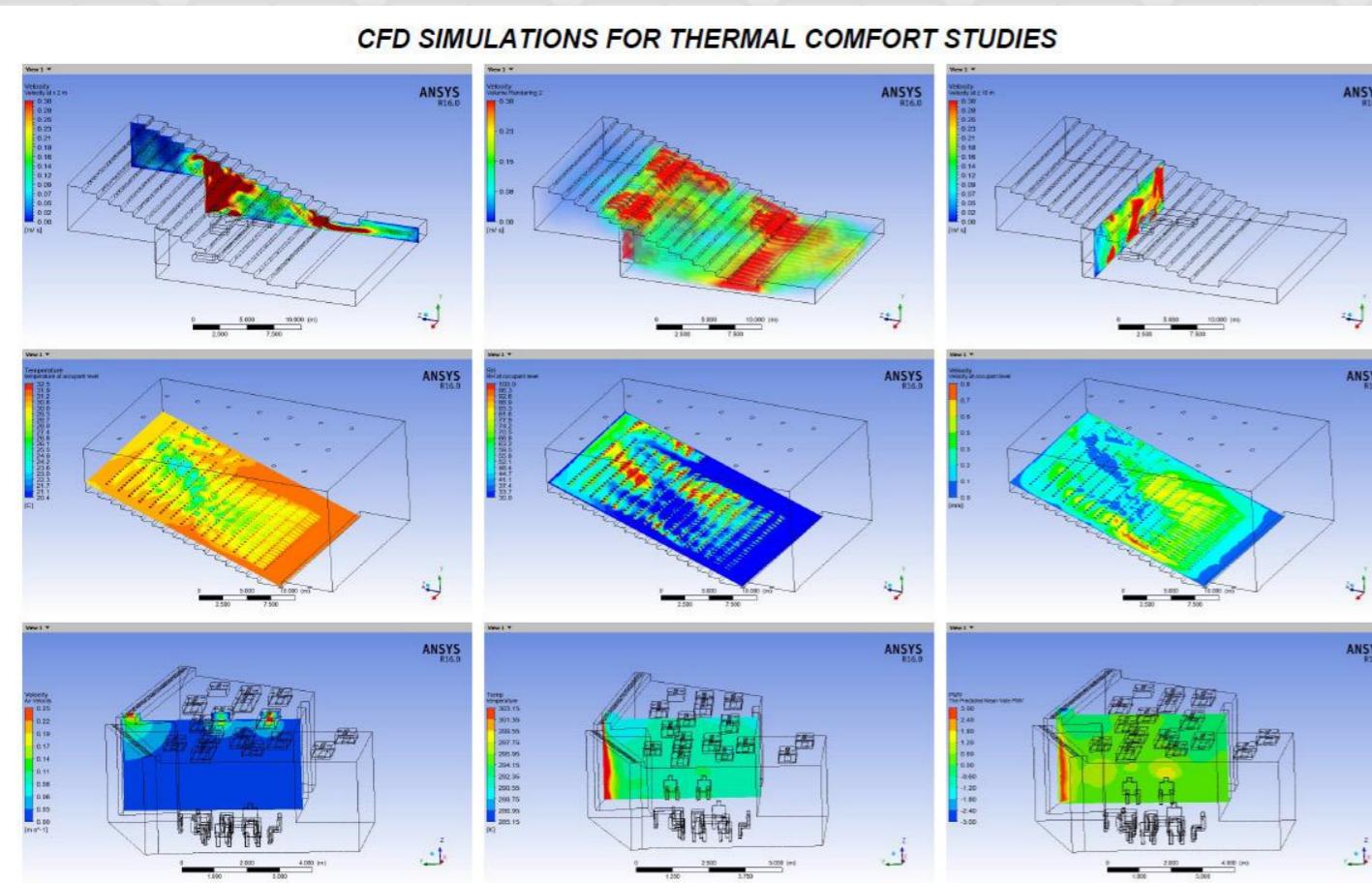
SOLAR RADIATION ANALYSIS



BIM CFD Simulation

ARCEEN expertise in air ventilation of buildings (car parks, atriums), tunnel airflow simulation, evaluating indoor thermal comfort for HVAC systems, also data center design performance analysis

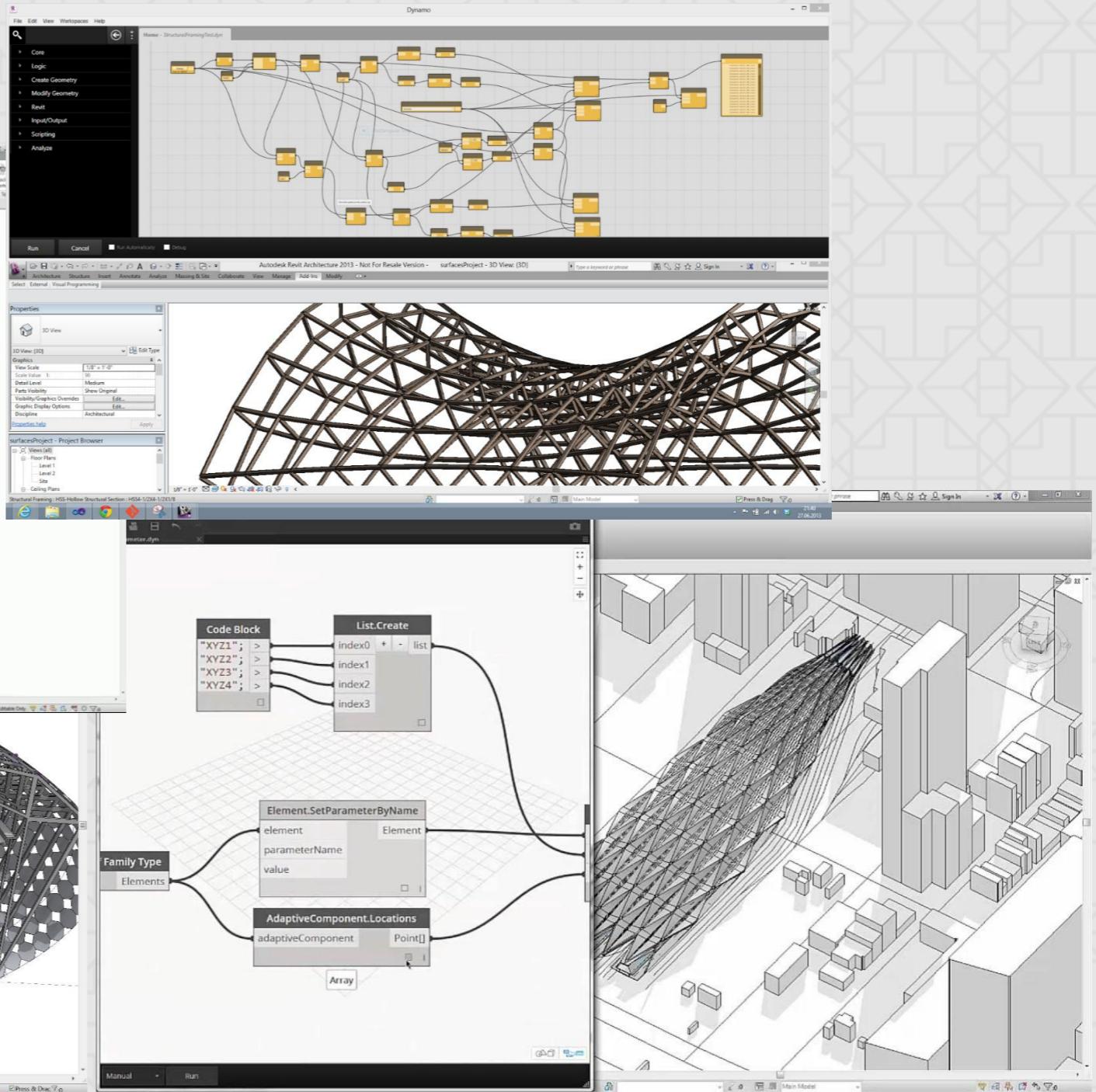
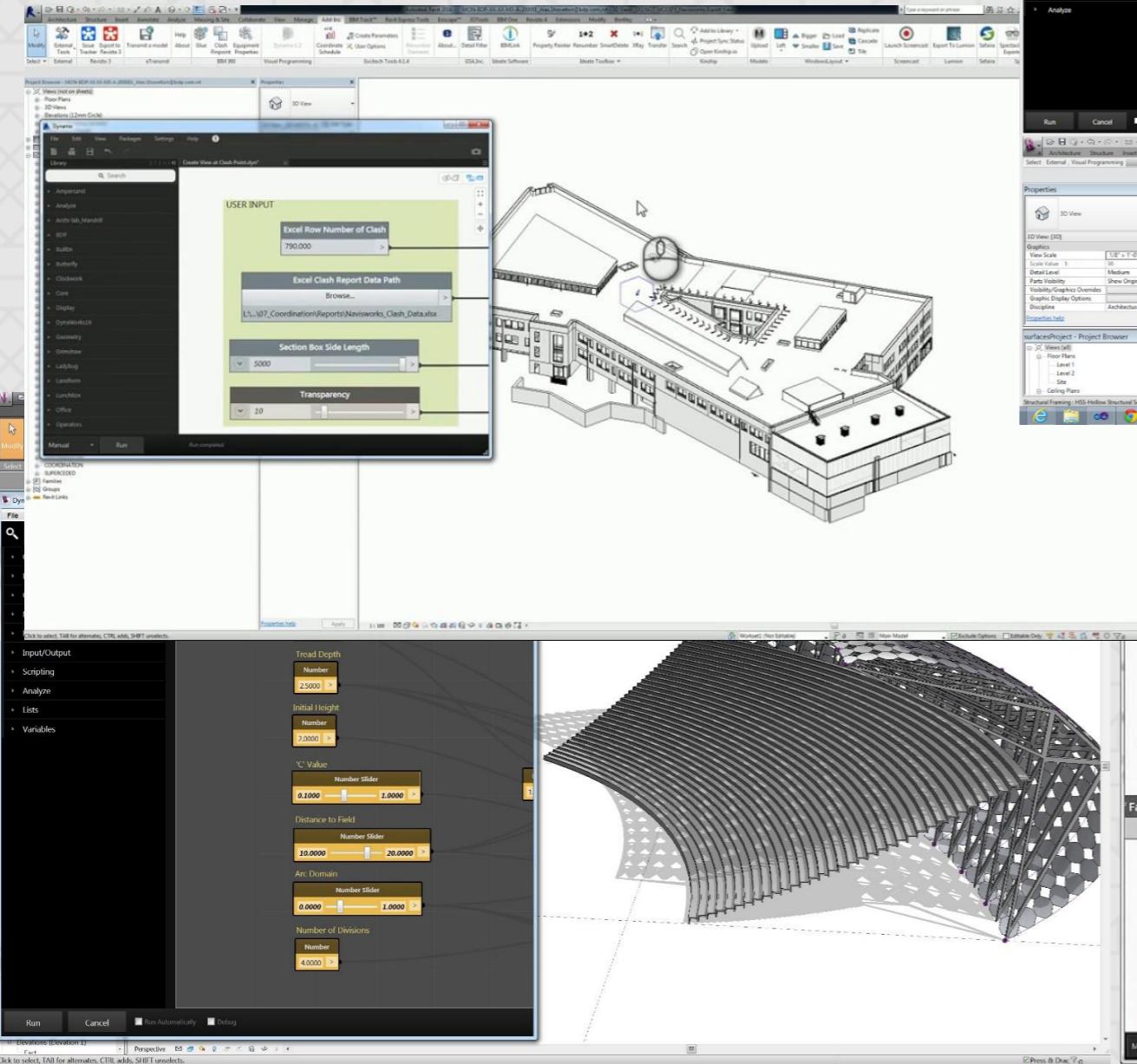
- providing computer simulation service in the field of Computational Fluid Dynamics using CFD software's Such as ANSYS FLUENT and FDS.
- Delivering a domain of expertise and experience combined with dedicated one-on-one interaction with designers and site engineers allows us to quickly respond to the project needs and deliver high-quality simulation results.





DYNAMO (API BIM Modeling)

Parametric and Digital Design





Selected Project | Offices & Working Places



Mixed-Use Projects – Riyadh – KSA:





Selected Project | Medical Healthcare



Medical & Health care Projects:





Medical & Health care Projects:

General Hospital Proposal – Egypt



General Hospital Proposal – Saudi Arabia





Medical & Health care Projects:

Jizan General Hospital – Jizan – KSA:

IFC DESIGN – BIM LOD 300

Projects Information:

- Project Location: Dammam - KSA
- Owner: Sadeq Group
- Client: Private – Real Estate
- Project Status: Delivered
- Lot Size: 6,000 sqm
- Total BUA: 50,000 sqm
- Project Type: New Construction
- Our BIM Scope: BIM Tender Package LOD 400
- Full IFC Clash-free BIM Design

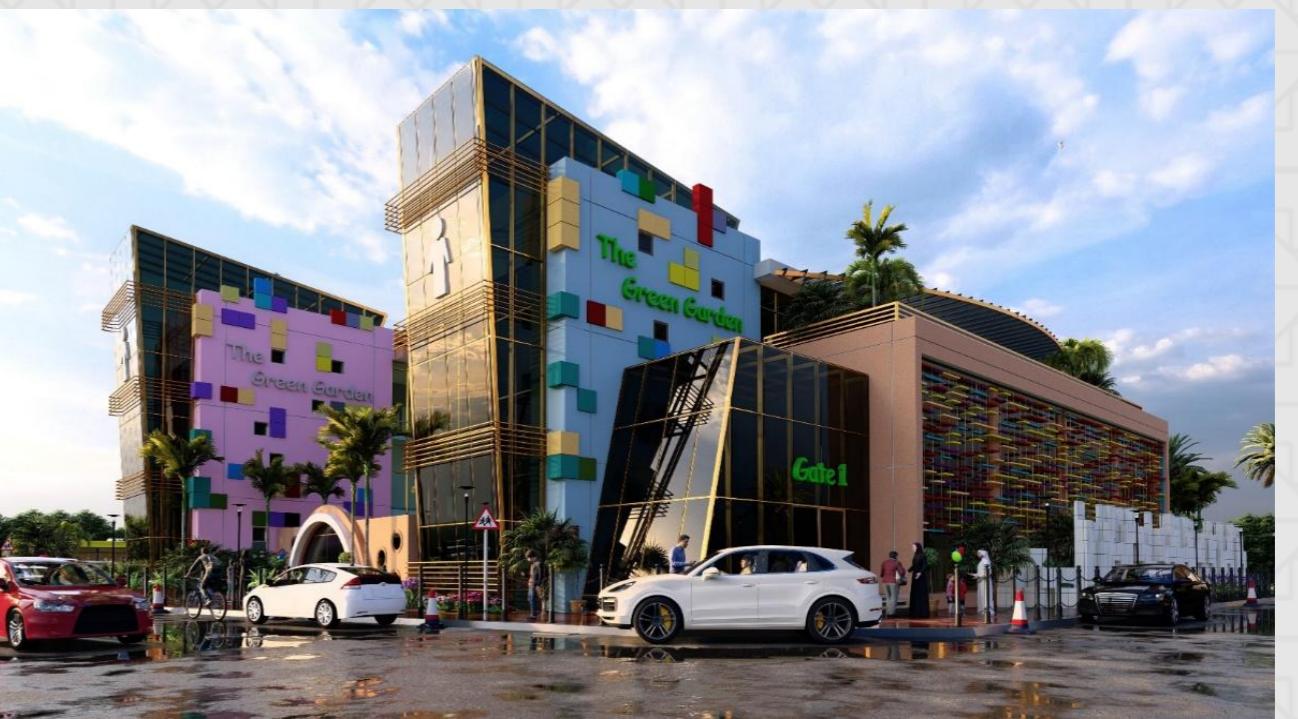
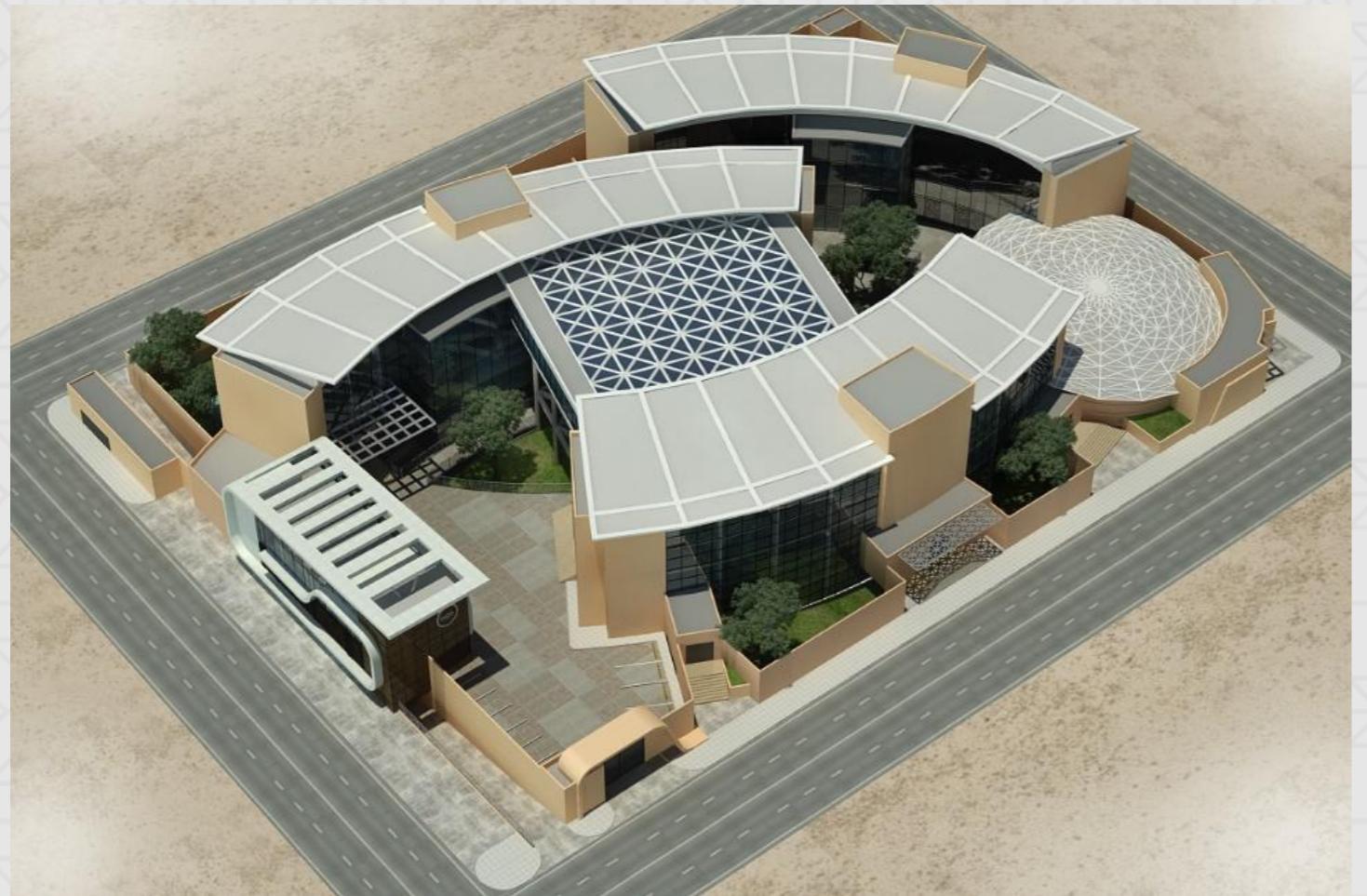




Selected Project | Educational Projects



Educational Projects – Schools & Academies :





Educational Projects :





Selected Project | Residential Projects



ARCEEN BIM Department

Housing

Masaya Housing Complexes (Typical 15 Apartments)– Riyadh - KSA

Project Information:

- Project Location: Riyadh – Saudi Arabia
- Owner: Private Sector
- Project Status: Closed
- Lot Size : 3500 sqm
- Total BUA: 8500 sqm
- Project Type: New Building
- Contract: Design Tender Package
- Our BIM Scope: Full BIM Tender Package LOD 300





Medical & Health care Projects:





Residential Projects :





AI SADEQ Tower – Dammam – KSA: IFC DESIGN – BIM LOD 400

Projects Information:

- Project Location: Dammam - KSA
- Owner: Sadeq Group
- Client: Private – Real Estate
- Project Status: Delivered
- Lot Size: 6,000 sqm
- Total BUA: 50,000 sqm
- Project Type: New Construction
- Our BIM Scope: BIM Tender Package LOD 400
- Full IFC Clash-free BIM Design





Our Most Selected Projects :





Selected Project | Design BIM Project LOD 500 | 6D Executed Projects

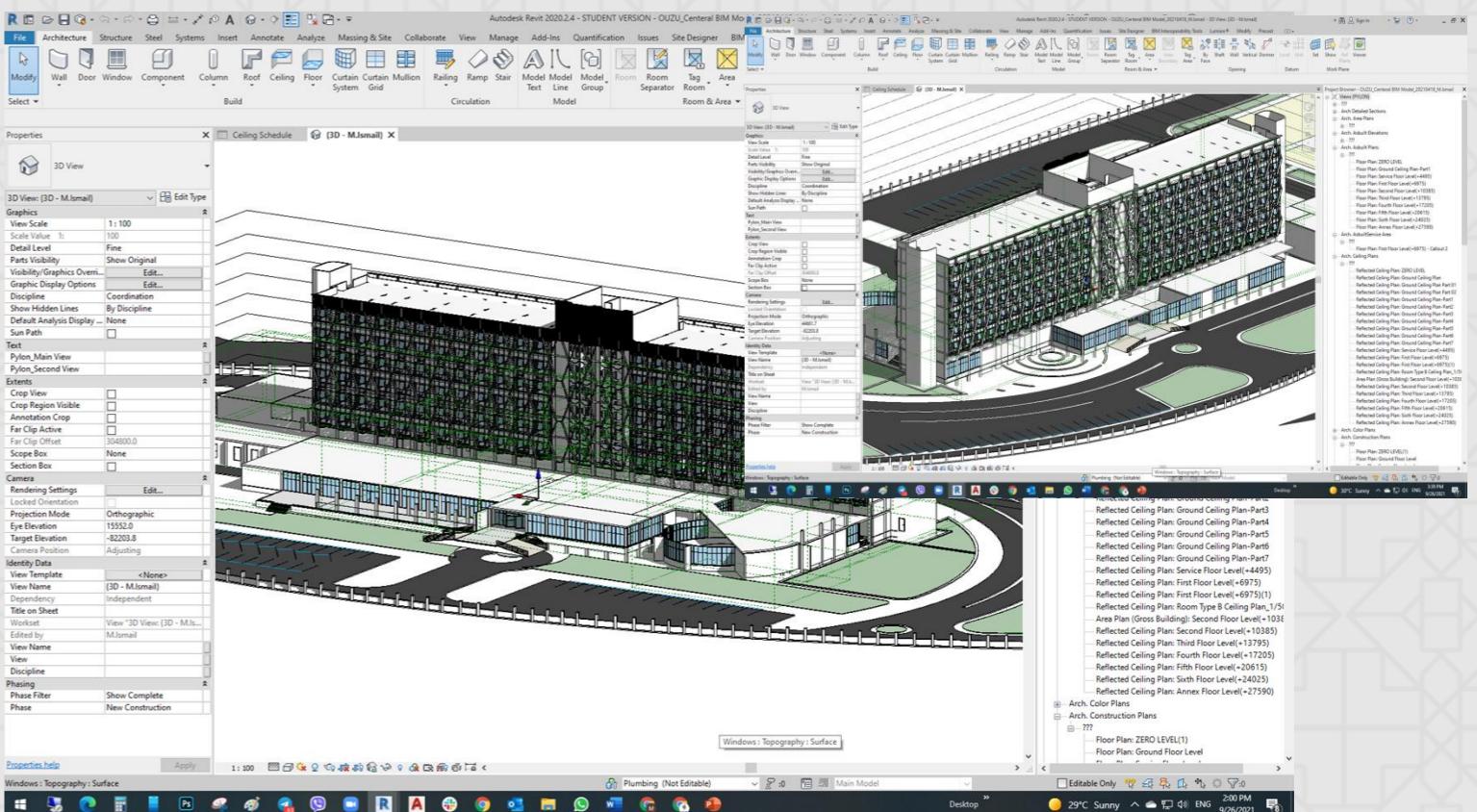


OZOU Hotel - Libya:

IFC DESIGN – BIM LOD 500

Project Information:

- Project Location: Libya – Benghazi
- Owner: Libya GOV.
- Client: Barga for Construction and Real Estate Company
- Project Status: Ongoing
- Lot Size: 60,000 sqm
- Total BUA: 10,000 sqm
- Project Type: Existing – Renovation Project
- Our BIM Scope: BIM Tender Package LOD 400
- 4D + 5D Simulation
- Other Scope: interior Design, Landscape Design,
- Infra-Structure Design.

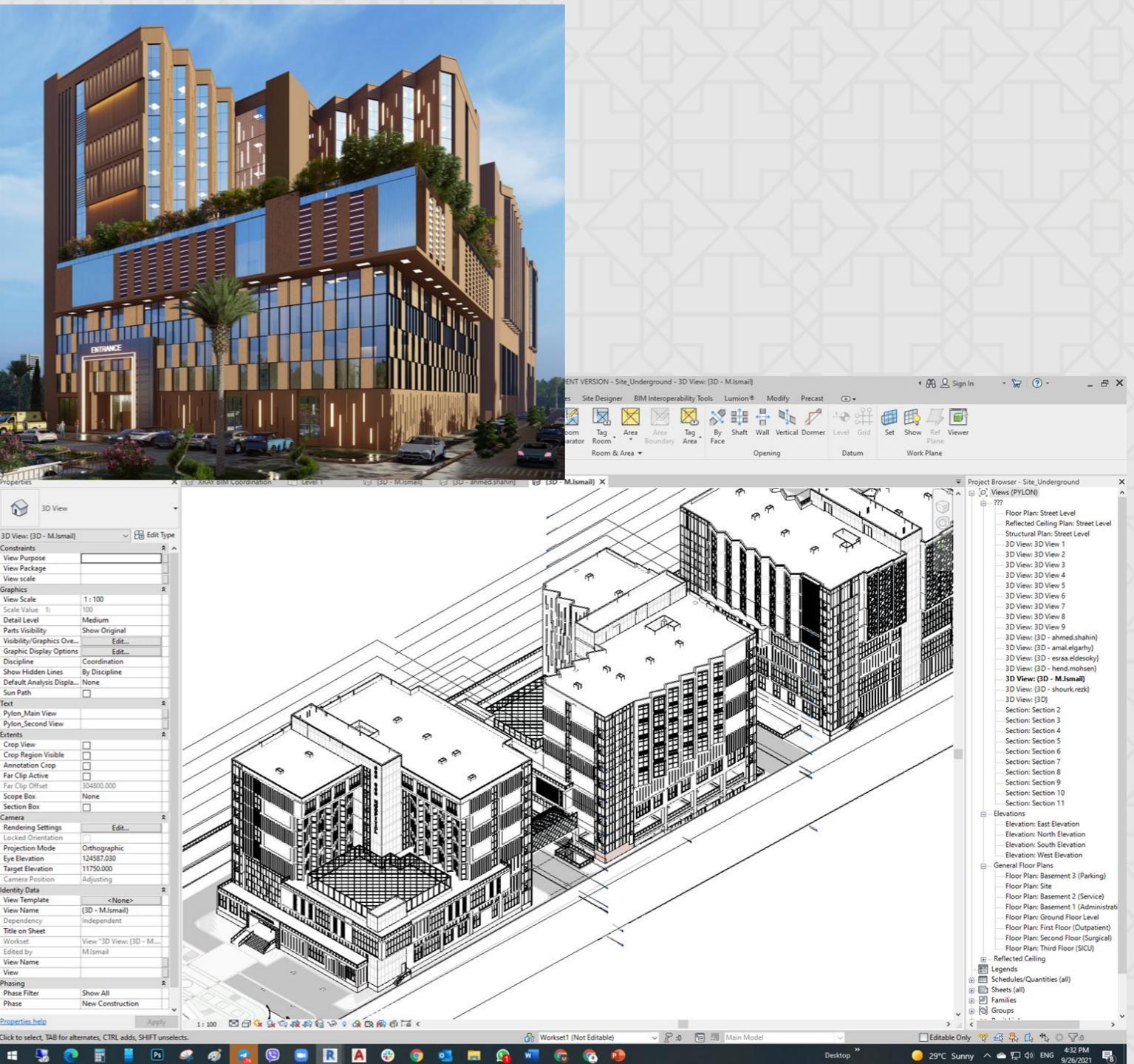




900-900 Hospital – Egypt – Gharbia - Tanta: IFC DESIGN – BIM LOD 500

Projects Information:

- Project Location: Tanta – Gharbia - Tanta
- Owner: Tanta University
- Client: Medicine Collage
- Project Status: On Going
- Lot Size : 12,000 sqm
- Total BUA: 50,000 sqm
- Project Type: New Building
- Our BIM Scope: BIM Tender Package LOD 400
- Other Scope: AR, ST, Medical, MEP Design





Kidney Hospital – Egypt – Gharbia – Tanta University:

IFC DESIGN – BIM LOD 500

Projects Information:

- Project Location: Tanta – Gharbia - Tanta
- Owner: Tanta University
- Client: Medicine Collage
- Project Status: On Going
- Lot Size : 12,000 sqm
- Total BUA: 50,000 sqm
- Project Type: New Building
- Our BIM Scope: BIM Tender Package LOD 400
- Other Scope: AR, ST, Medical, MEP Design



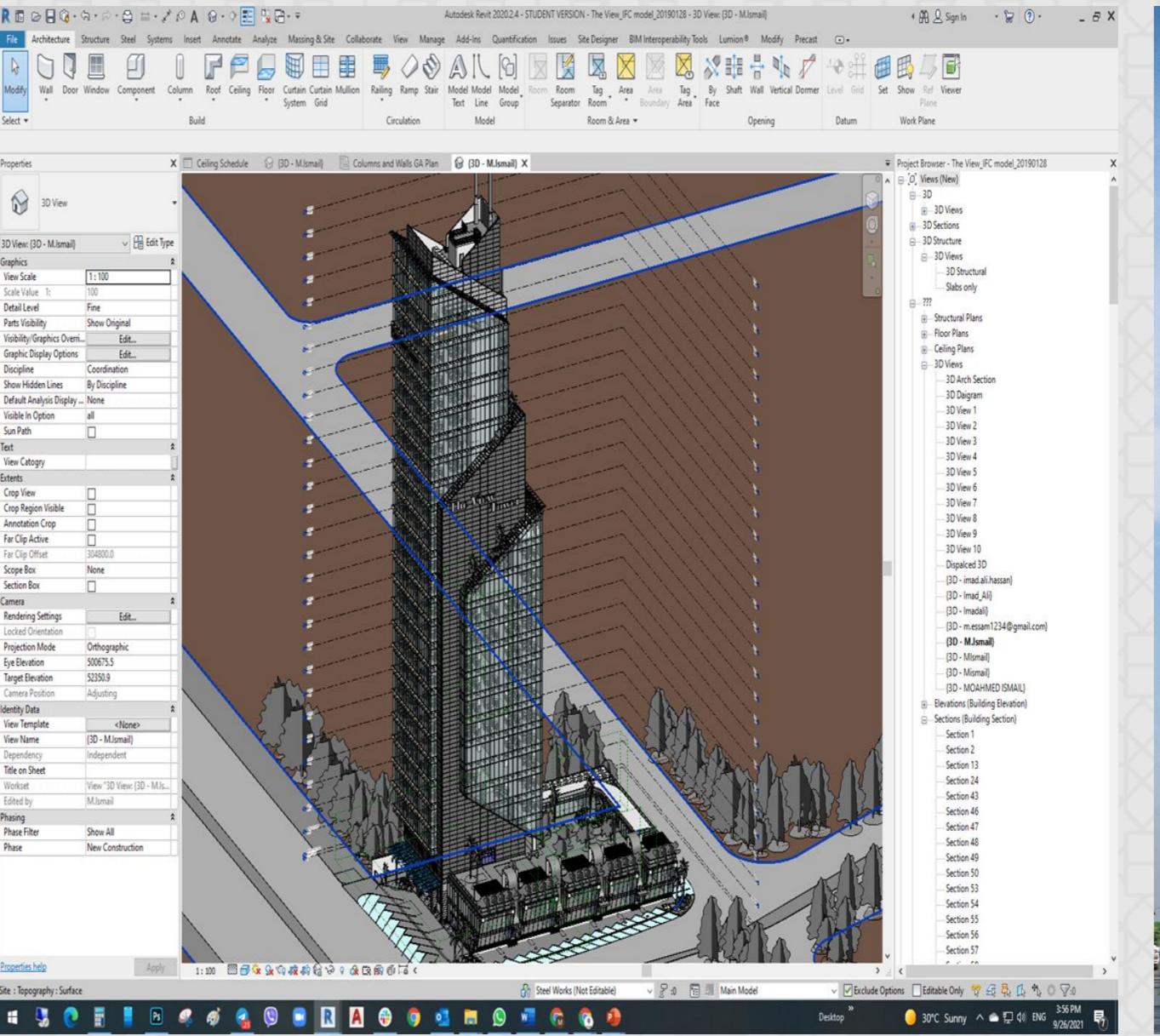
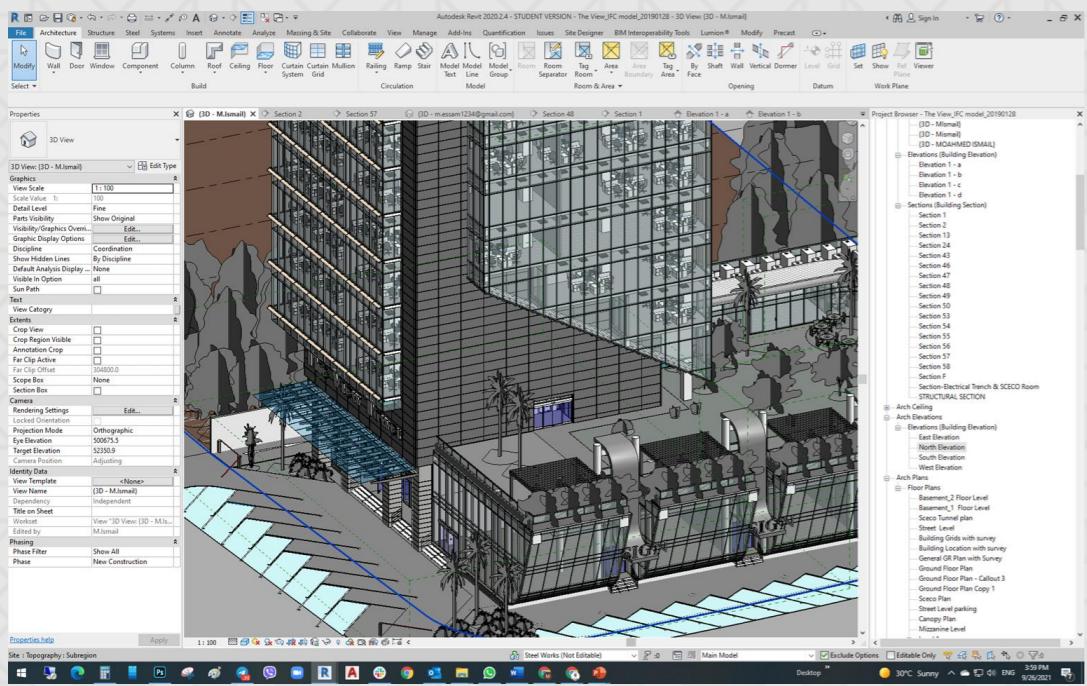


THE VIEW Tower – Al Ahsa - KSA

IFC DESIGN – BIM LOD 500

Project Information:

- Project Location: Al Ahsa – Saudi Arabia
- Owner: Private Sector
- Client: Private Sector
- Project Status: Closed
- Lot Size : 6000 sqm
- Total BUA: 23,000 sqm
- Project Type: New Building
- Our BIM Scope: BIM Tender Package LOD 350
- 4D +5D Simulation
- Clash Reporting – Free of clashes



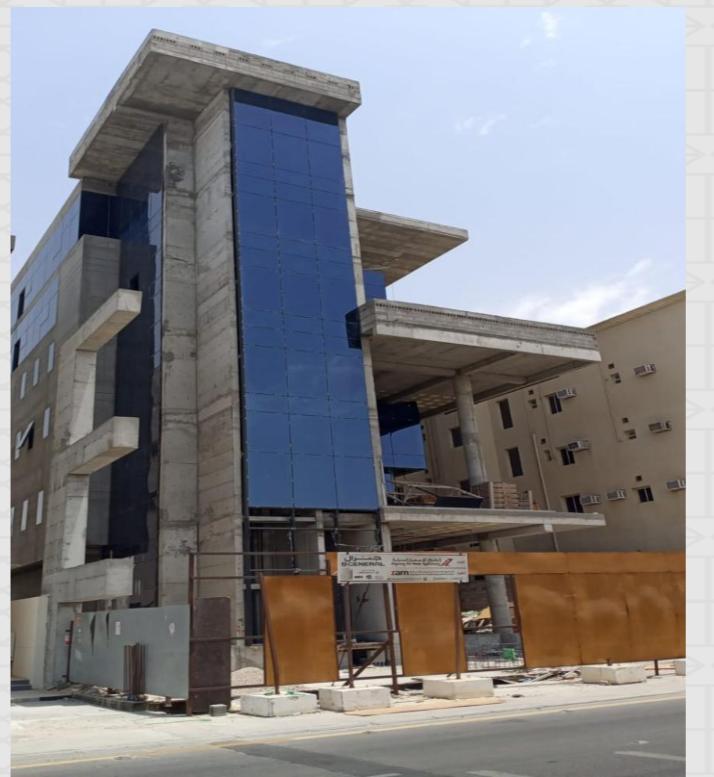
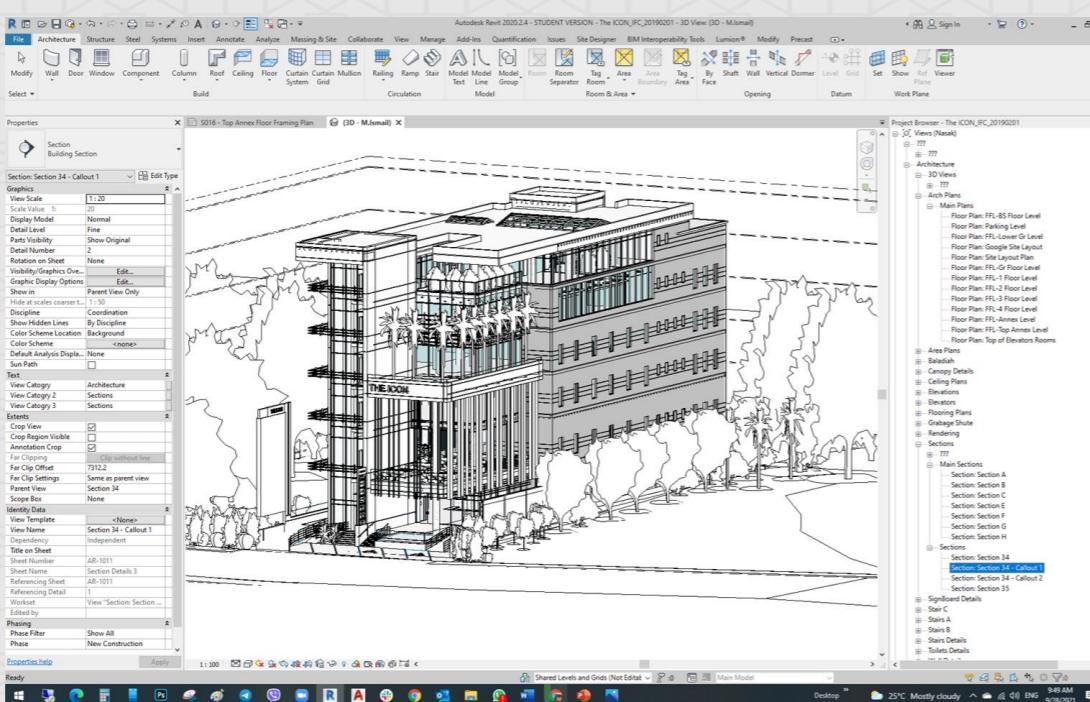


THE ICON – Al Ahsa – KSA

IFC DESIGN – BIM LOD 500

Project Information:

- Project Location: Al Ahsa – Saudi Arabia
- Owner: Private Sector
- Client: Private Sector
- Project Status: Closed
- Lot Size : 1200 sqm
- Total BUA: 5000 sqm
- Project Type: New Building
- Contract: IFC Package + As-Built
- Our BIM Scope: Full BIM Tender Package LOD 500





Our Most Selected Projects :





Selected Project | Urban Projects



Kidney Hospital – Egypt – Gharbia – Tanta University: IFC DESIGN – BIM LOD 300

Project Information:

- Project Location: Alexandria – Egypt
- Owner: Elite Educational Services Company
- Project Status: Ongoing
- Lot Size : 60,000 sqm
- Total BUA: 150,000 sqm
- Project Type: New Building
- Our BIM Scope: BIM Tender Package LOD 300
- 4D +5D Simulation





NEW TANTA City – Egypt – Gharbia:

IFC Urban DESIGN – BIM LOD 300

Project Information:

- Project Location: Alexandria – Egypt
- Owner: Elite Educational Services Company
- Project Status: Ongoing
- Lot Size : 60,000 sqm
- Total BUA: 150,000 sqm
- Project Type: New Building
- Our BIM Scope: BIM Tender Package LOD 300
- 4D +5D Simulation





NEW TANTA City – Egypt – Gharbia:

IFC Urban DESIGN – BIM LOD 300

Project Information:

- Project Location: Alexandria – Egypt
- Owner: Elite Educational Services Company
- Project Status: Ongoing
- Lot Size : 60,000 sqm
- Total BUA: 150,000 sqm
- Project Type: New Building
- Our BIM Scope: BIM Tender Package LOD 300
- 4D +5D Simulation





NEW TANTA City – Egypt – Gharbia: IFC Urban DESIGN – BIM LOD 300

Project Information:

- Project Location: Alexandria – Egypt
- Owner: Elite Educational Services Company
- Project Status: Ongoing
- Lot Size : 60,000 sqm
- Total BUA: 150,000 sqm
- Project Type: New Building
- Our BIM Scope: BIM Tender Package LOD 300
- 4D +5D Simulation



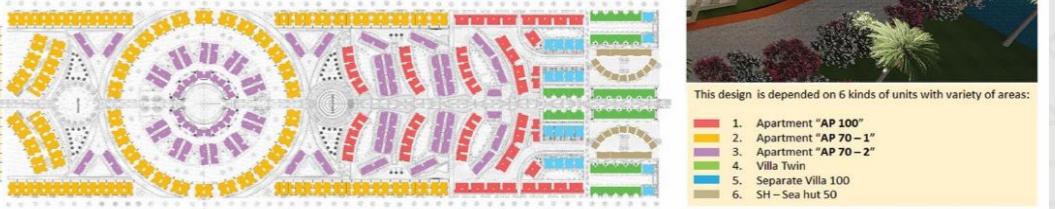


NEW TANTA City – Egypt – Gharbia:

IFC Urban DESIGN – BIM LOD 300

Project Information:

- Project Location: Alexandria – Egypt
- Owner: Elite Educational Services Company
- Project Status: Ongoing
- Lot Size : 60,000 sqm
- Total BUA: 150,000 sqm
- Project Type: New Building
- Our BIM Scope: BIM Tender Package LOD 300
- 4D +5D Simulation





NEW TANTA City – Egypt – Gharbia:

IFC Urban DESIGN – BIM LOD 300

Project Information:

- Project Location: Alexandria – Egypt
- Owner: Elite Educational Services Company
- Project Status: Ongoing
- Lot Size : 60,000 sqm
- Total BUA: 150,000 sqm
- Project Type: New Building
- Our BIM Scope: BIM Tender Package LOD 300
- 4D +5D Simulation





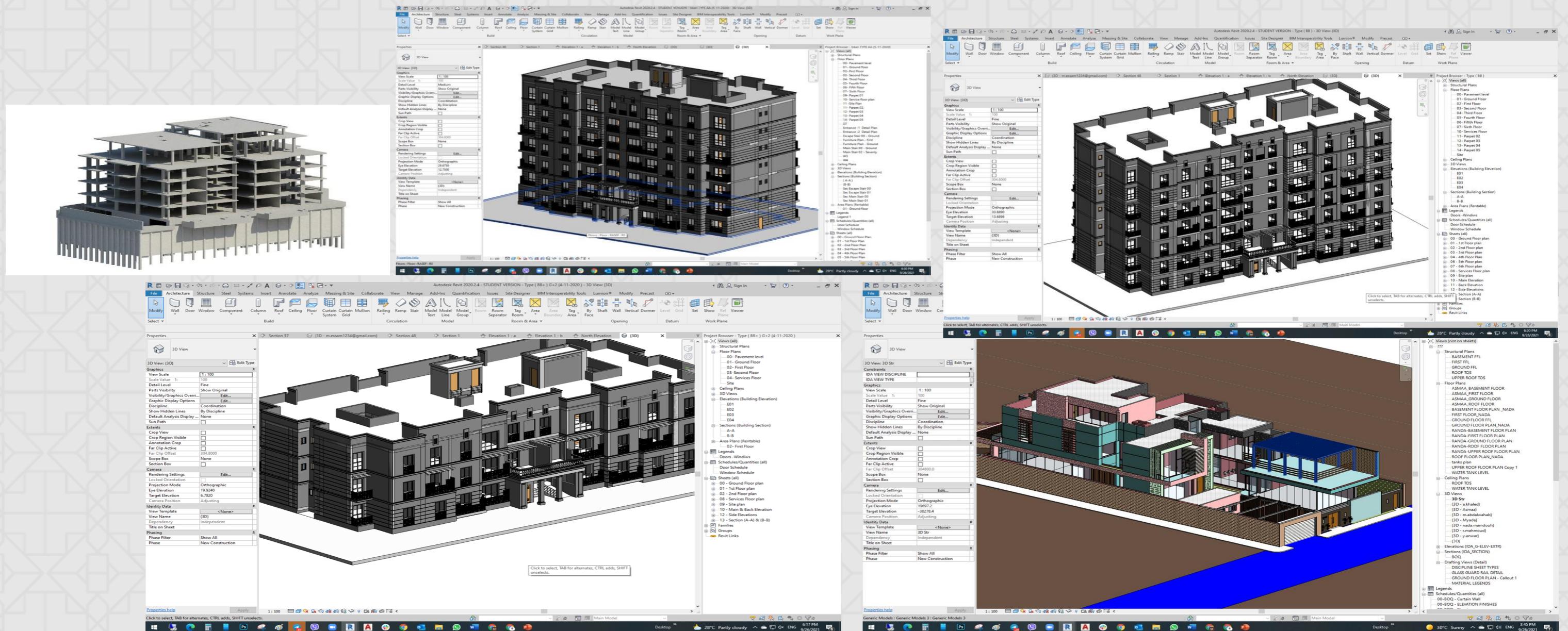
NEW TANTA City – Egypt – Gharbia:

IFC Urban DESIGN – BIM LOD 300

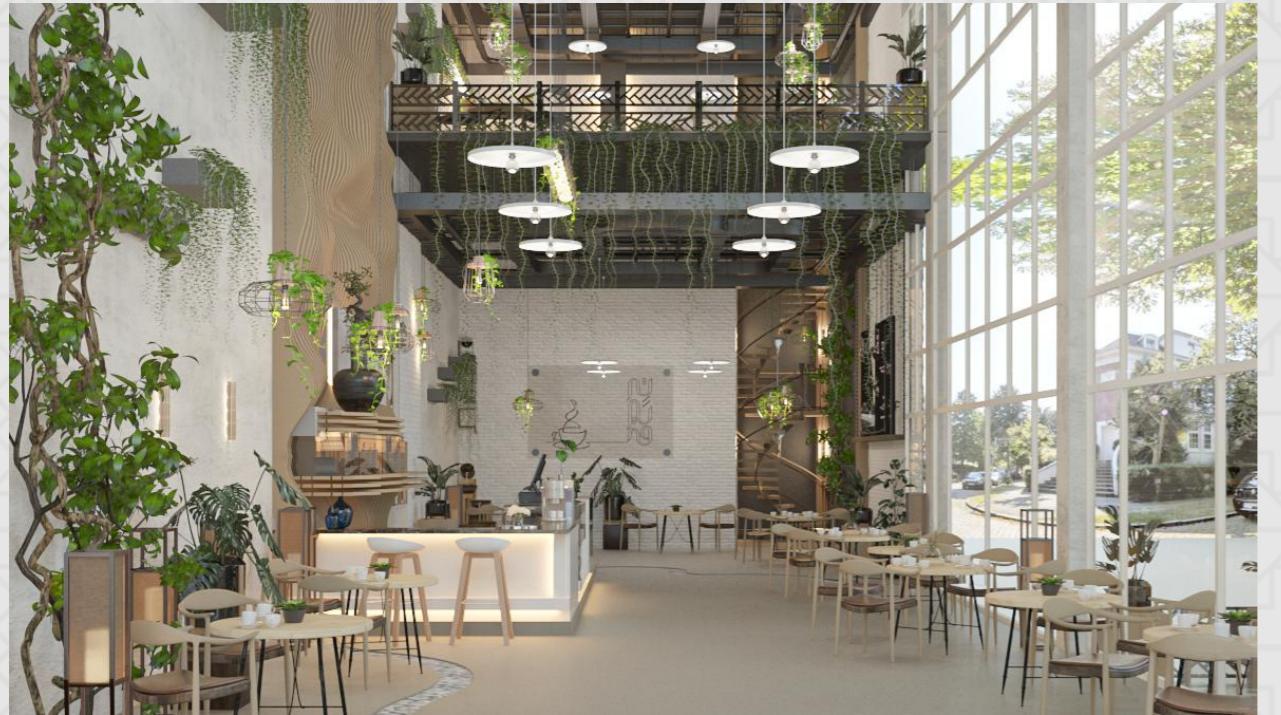
Project Information:

- Project Location: Alexandria – Egypt
- Owner: Elite Al Borg Services Company
- Project Status: Ongoing
- Lot Size : 45,000 sqm
- Total BUA: 80,000 sqm
- Project Type: New Building
- Our BIM Scope: BIM Tender Package LOD 300




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