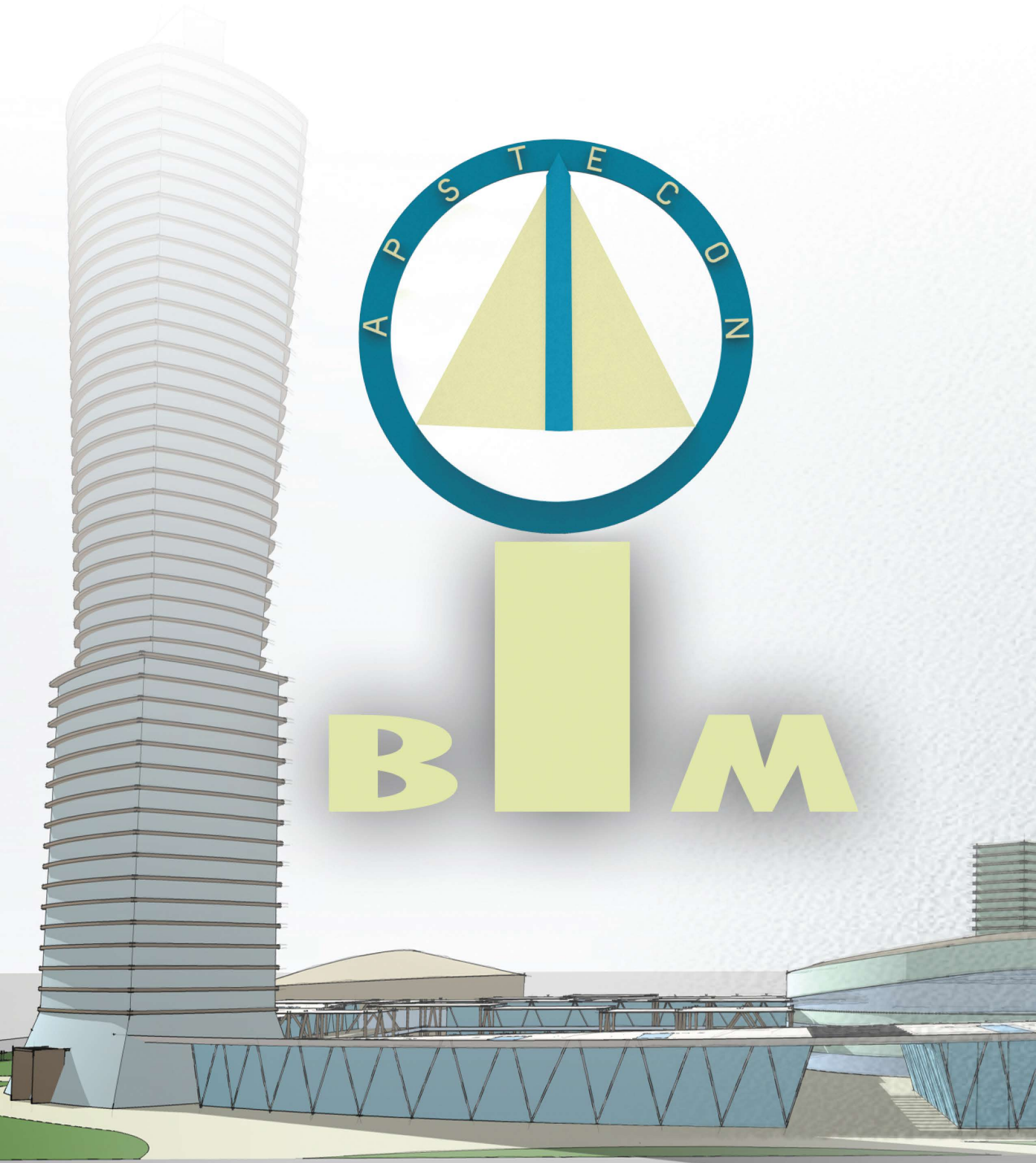


BUILDING INFORMATION MODELLING



APSTECON

www.apstecon.com
enquiries@apstecon.com

BUILDING INFORMATION MODELLING

WHAT IS BIM



Building Information Modelling (BIM)

BIM process involves creating intelligent 3D - models for communicating project information & simulating the actual building construction process in time & space. Embedded information in the 3D model (e.g properties/specifications of building equipment and components) is the key which differentates a BIM model from a conventional model.

It creates clarity of design, construction process and reduces cost and time. It allows various participants of a project to coordinate, forecast and eliminate problems long before they occur thus reducing financial inputs, time inputs and giving a greater control on work process.

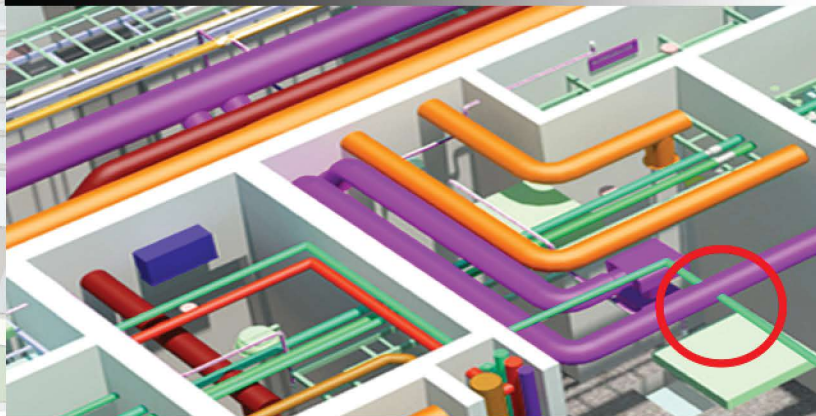
As built model helps regulate the life cycle information, maintenance of structure & improves building performance



Advantages of BIM

- Eliminates unbudgeted changes
- Reduces material & manpower waste
- Gives accurate quantities to order
- Ongoing saving in Facility Management System
- Visualize the building design in 3D with all specifications and fittings.
- Reduction in project time
- Savings in contract value through clash detection
- Avoid const. rework through clash detection

CLASH DETECTION

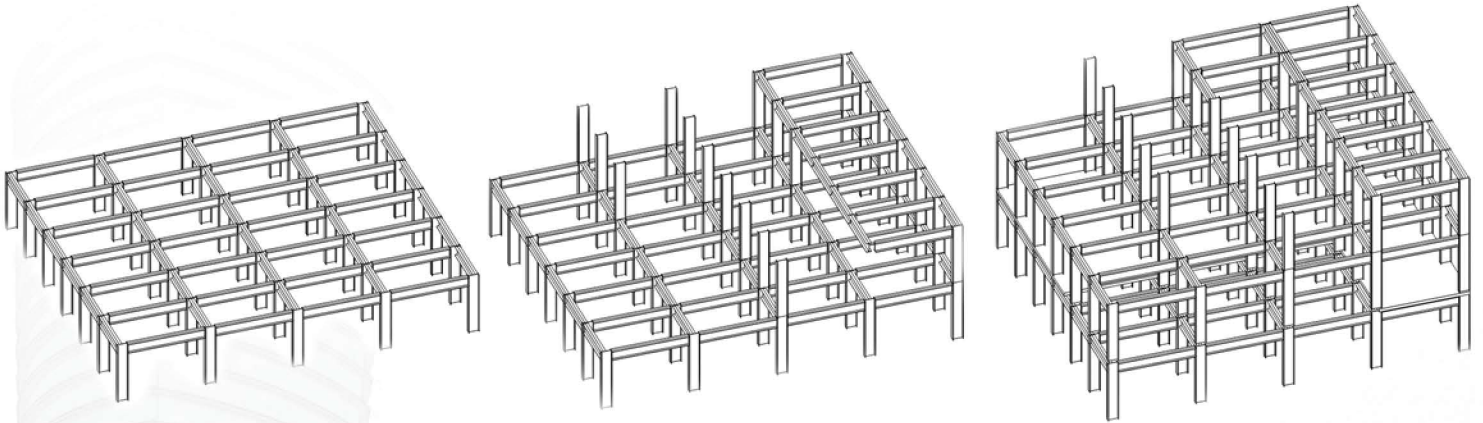


BUILDING INFORMATION MODELLING

WEEK 3

WEEK 6

WEEK 9



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Building Construction Industry is a sector which requires a lot of people from various engineering disciplines to come together in order to create infrastructure that exceeds or at least fits the customers' requirements. It is highly competitive and yet a sector that requires constant innovation, continuous design and project management support on a day to day basis to ensure correctness first time and save time and money.

At Apstecon, our goal is to provide best in class architectural, mechanical & civil engineering design as well as project management solutions to our customers at the most competitive prices.

With thousands of man hours of design experience, rich resource pool and a workforce willing to explore new grounds we are here to cater to all your engineering design needs.

OUR BIM SERVICES

- BIM Solutions:

We provide BIM solutions for all range of projects & our teams have the capability of providing a customized environment meeting the goals of your projects in given deadlines.

- BIM Training:

BIM being a high resource consuming process needs intricate knowledge of the subject for efficient implementation and prevention of problems later on. Our staff is capable of training in BIM from core concepts to actual implementation.

- BIM Content Creation:

We create content for manufacturers who want their products to be implemented in BIM. Revit families (which are reusable 3D models with embedded specifications organized into classes based on visual and specification similarities) are efficient method of preventing rework and embedding model with data.



BUILDING INFORMATION MODELLING

OTHER SERVICES

MECHANICAL ENGG. SERVICES

- Concept Development
- Legacy Data Conversion
- Data Migration
- Parametric part modelling
- Manufacturing drawing creation
- Assembly, Fabrication & GA drawing creation
- Part library creation for data reuse
- Assembly Design
- Intermediate BOM preparation
- Variant/Configuration generation from existing designs as well as design automation through equations and excel
- Structural Analysis
 - Static Analysis- linear and nonlinear
 - Modal Analysis
 - Harmonic Analysis
 - Transient Dynamic Analysis
 - Buckling Analysis- linear and nonlinear
- Thermal Analysis
 - Conjugate Heat Transfer Air/ Water/ Oil-Cooled Motor
 - PCB/Electronic Cooling
 - Building Ventilation Natural/Forced
 - Radiation Model
 - Thermal Comfort Modeling
 - Heat Exchanger Designs – Shell & Tube/ Compact/Spiral
 - Design of Energy Recovery Systems
 - Smoke Simulation/Fire Evacuation of Bldgs.- Wake Pattern
 - Fluid-Structure / Thermo-Structure Interaction
- Fluid Flow Analysis
 - Centrifugal Pumps/Hydro-Turbines - Steady and Unsteady Flows
 - Laminar/Turbulent Flows
 - Internal/External Flows
 - Gas Turbine/Wind Turbine Component Design
 - Fan/Blower Design and Analysis
 - Multiphase (Eulerian/Lagrangian) Flows – Oil & Gas Applications
 - Valve Wear Characteristics Prediction - Particle Flows
 - Porous Media Flow – Simulation of Filtration Equipment
 - Advanced Post – Processing for CFD Results
 - CFD - Positive Displacement Pumps
 - Spray and Atomization – Nozzle Spray
 - Compressible & Incompressible Flow
- 3D scanning Services
- Point Cloud/mesh Preparation for modelling
- Surface/ soild model creation from point cloud/ mesh data
- Photorealistic Renderings for sales literature
- Line drawings for installation and service manuals
- Assembly process document creation
- Interactive animation training creation for assembly operators

ARCHITECTURAL SERVICES

- Schematic Drawings
- Presentation Drawings
- Working Drawings
- MEP drawings
- Manufacturing Drawings
- Fabrication Drawings
- Concept Drawings
- Patent drawings
- Shop Drawings
- CAD Digitization
- 3D Model and Animations
- Cost Estimation
- Scheduling and Phasing
- Interactive 3D Model
- Energy Analysis and Life Cycle Costs
- Lighting Analysis

