



GET IN TOUCH

 +61 9227 0977

 admin@cadsult.com.au

 Australia / Singapore
www.cadsult.com.au

**SUSTAINABILITY
& INNOVATION**



SERVICES

We offer design consultation, documentation, management of your design assets and visualization of your designs. No matter what stage of design process our patrons are, we deliver results with remarkable BIM efficiency.

Focusing on reducing change orders and risks we optimize and compress schedules to improve design quality and provide efficient handover. Our services extend from city wide infrastructure projects to single unit boutique residences.

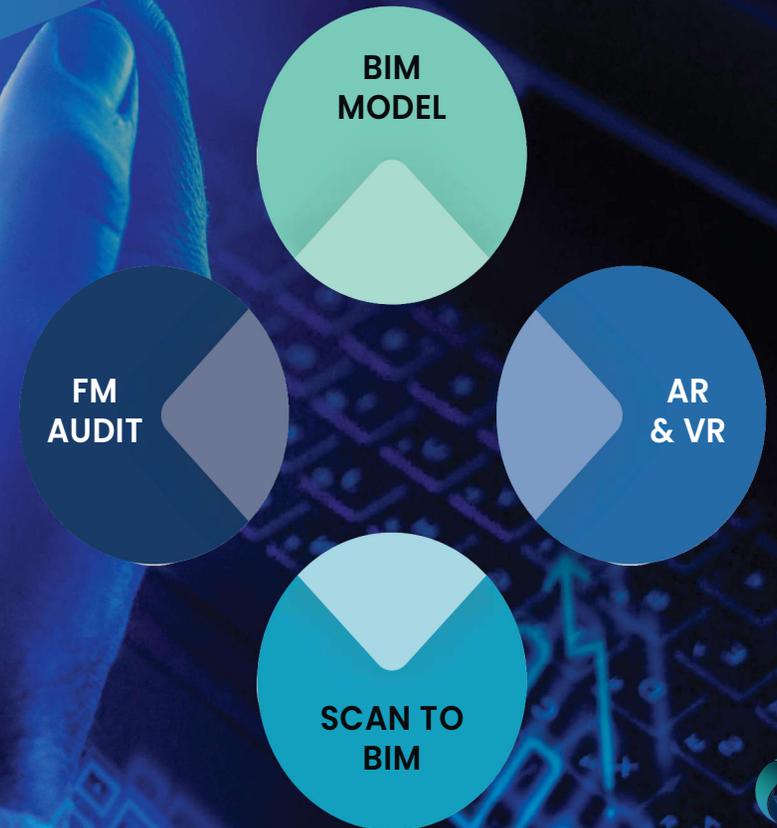
WHO WE ARE

CADSULT & Perfect BIM Solutions, your companions in the race of excellence. Affirming to our endeavour for perpetual improvement our design management outsourcing firm now provides comprehensive BIM solutions for multifarious AECO industry sectors. Leveraging BIM to the utmost we promise to deliver

MODUS OPERANDI

International resources helping you leverage time-zone difference to compress schedules. Our quality assurance and quality check team conduct rigorous inspections ensuring flawless deliverables at all stages of the project meeting the highest industry standards. Automating repetitive tasks for smooth workflow and reducing waste, we facilitate significant boost in ROI. Integrating required information like manuals for technical installations, terms of warranty, design specifications and images to all our models so all stakeholders involved can comment and extract them whenever needed.

We also take pleasure in empowering our clients' business by navigating them through the process of adopting and implementing BIM whilst turning the challenges to achievements.



BIM FOR STRUCTURE

Structure is an integral part of the building system. In conventional procedures, it is challenging and cumbersome to change at later stages of design process and construction. Our Structural BIM services help you transition smoothly from design to fabrication and operation to renovation stage, managing constructability before any documentation is prepared. Our professionals create models to your specified precision with accurate specifications. We provide you improved flexibility in engineering management through our design analysis and review. Our construction and installation drawings are meticulously detailed and weldy, making builders and workers task cost & time efficient

Our Services



Structural 3D, 4D & 5D BIM modeling

- Structural design & analysis
- Construction feasibility & risk mitigation strategy
- Code compliance review
- Construction sequencing & scheduling



Structural steel detailing

- Structural reinforcement detailing
- Structural shop drawings
- Construction documentation
- Precast assembly drawings
- Statutory approval drawings



As-built documentation



Facility Management deliverables

BIM FOR MEPF

Mechanical, electrical, plumbing and fire safety (MEPF) services are critical engineering services for any construction project. Their quality determines the satisfaction of end user. With our customised BIM design matrix, we facilitate well-organised inter-disciplinary coordination, collaboration and construction. This leads to maximum space utilization and ease of maintenance. Our engineers provide extensive audits, appraisals, analysis, code compliance computations and proposals achieving ideal life cycle operation and costs. With our well-planned models, we can extract precise information in the form of quantity take offs and cost estimations.

Our Services



MEPF 3D, 4D & 5D BIM modeling

- MEPF BIM modeling
- Code compliance review
- Estimation & precise Bill of Quantities & Materials
- Construction sequencing & scheduling



MEPF coordination & constructability review

- Virtual Simulation – FEA & CFD
- Parametric components & Family creation



Spool & Assembly drawings

- Statutory approval drawings
- Construction documentation
- Fabrication & Shop drawings



Energy analysis

- Facility Management deliverables



Point cloud modeling

- As-built modeling & documentation



BIM FOR ARCHITECTURE

Architecture is one of the sectors advanced tremendously with the advent of BIM. Correspondingly, we have optimized our design workflow to leverage BIM tools to assist architects with efficient spatial planning, computational design, parametric relationships and model element dependency and energy analysis among others. From the initiation of design, with BIM we help you infer contingencies and compare distant ramifications of specified constructions, installations and modifications. We provide you with consolidated design, engineering, construction and operations assessments at every stage of the project life-cycle. Consequently, less errors, minimum changes at later stages, better coordination, organization and documentation

Our Services



Architectural services

- Design services
- Working details
- Construction documentation
- Statutory approval drawings



Library

- Building component packs
- Customized family creation
- Vendor- specific products



Estimation & precise Bill of Quantities & Materials

- Code compliance review
- 3D, 4D & 5D BIM modelling
- Construction sequencing & scheduling



Facility Management deliverables



Visualization services

- 3D floor plan
- Rendered views
- Rendered drawings
- Walkthroughs



Project management



As-built documentation

BIM FOR LANDSCAPE

Although B in BIM stands for Building, it refers to the process. Thus, BIM applied to Landscape updates the conventional system to digitization of creation, coordination and documentation by adding information to model that can be extracted when needed. For example, a tree would have information about its scientific name, root size, condition, install height, mature height, spread, water and sun requirements, and bloom time embedded in the object.

Our BIM process brings indelible value to facility operation and contractors' work with our accurate cost estimates and schedules. We provide extensive analysis for numerous landscape parameters leveraging informed decisions at early stages, like capturing & storing rainwater, space optimization for utilities & drainage, tree root zones, levels, attenuation tanks, retaining structure & the building annex.

Our Services



Landscape services

- Design services
- Terrain & cut fill analysis
- Sun & Shade
- Coordination & constructability review
- Working details
- Construction documentation
- Code compliance review
- Statutory approval drawings



As-built documentation



Facility Management deliverables



3D, 4D & 5D BIM modelling

- Parametric components & Family creation
- Construction sequencing & scheduling



Project management



AUGMENTED AND VIRTUAL REALITY

User experience being the center of all man-made creation has led to development of many tools. Virtual reality (VR), the as-built reality and Augmented reality (AR), informative reality are two such tools that are the apex of design visualization. We integrate BIM with AR providing immersive experience with our interactive walkthroughs and real time renders.

Our AR & VR headset compatible BIM models facilitate visualization of step-by-step simulations leading to efficient workflow, coordination, communication, decisions and design delivery for all stakeholders. During construction these models facilitate contractors in onsite and offsite supervision, authentication of site activities, planning and management.

We also support AEC firms to implement AR with 6D BIM model for facility management.

Our Services



VR & AR headset compatible BIM models

- BIM models for Holographic displays
- Design review and constructability strategy
- Design communication with client and stakeholder
- Immersive design valuation with augmented designs



Facility Management

- Design planning and management
- Logistics management and scheduling



Assist BIM implementation to be AR & VR ready

- Support firms with implementation of AR & VR



Point cloud to 3D BIM model



As-built Model Analysis

- Building performance analysis
- Accessibility review
- Structural analysis



Reconstruction simulation & analysis



Quantity take-off and RFI for refurbishments



As-built surveys

- Scan to 2D as-built floor plans, elevation and section drawings
- Discrepancy study between the As-built Model and As-designed BIM Model
- Study implementation of tolerance values specified in relevant codes and regulations
- Documentation of components utilized in the building including complex geometries



Facility management strategy

- Operations and management
- Space management
- Emergency strategy

SCAN TO BIM

Employing Terrestrial LiDAR, Mobile Laser Scanning (LMS) & photogrammetry we generate accurate point cloud model and as-built BIM model. These comprehensive models allow exporting and importing of data for as-built conditions and field authentications eradicating the need for repeated site visits. Our experts are well versed in interpreting the scanned model to relevant data as required by our clients. Our models are invaluable for retrofit, refurbishment and renovation projects across sectors including design, engineering, infrastructure and real estate. Scanning the construction asset to BIM at regular stages enables flawless coordination & mitigation of errors.

Our Services



FACILITY MANAGEMENT

Operation and maintenance of a building asset is as crucial to an owner as a successful handover is to designers and engineers. To facilitate this, we develop 6D & 7D BIM models with the right amount of data to track and extract such as specifications, operation manuals, component status, warranty data, etc. These models work efficiently with popular Computerized Maintenance Management System (CMMS). We facilitate creation and implementation of Facility Management solutions customised to the project requirements. This leads to smooth extraction of data for quick and convenient replacement of parts. We also outline guidelines for contractors and subcontractors to update and maintain that data with subsequent replacement and renovations.



We Ensure



Improved space management with reduction of vacancy and real estate expenses



Efficient use of energy through analysis and comparisons of various energy alternatives to help facility managers dramatically reduce environmental impacts and operating costs



Enhanced life expectancy and replacement costs in BIM models with increased ROI.



Maintenance program aiming at increased efficiencies and preventive measures for a lasting life.



Accurate and complete as-built documentation for maintenance and future renovations



To ensure that outputs from a BIM model are reliable, accurate and consistent, it is mandatory to adhere to industry best practices, standards and LOD. This is achieved through BIM Audit. Auditing is review, validation and solution of anomalies in the BIM model, its documentation, design intent and building code adherence.



Visual Check

Marking of discrepancies in navigating the model from free-floating objects to visual details like fill patterns.



Clash Check

Linked models alignment, critical warnings, linking of references to original views, generating and reviewing reports highlighted major issues resolved and unresolved.



Nomenclature Check

Verifying nomenclature as per BEP standards for ease of communication and coordination among stakeholders. This includes all file names, linked file names, families and other elements.

