



ARCHICAD IS BIM

AND BIM IS  
THE FUTURE

ARCHICAD is a professional building information modeling software solution complying with all digital-delivery requirements, offering an intuitive design environment, accurate building information management, open collaboration and automated documentation.

**GRAPHISOFT**<sup>®</sup>  
A NEMETSCHEK COMPANY

# INTUITIVE DESIGN

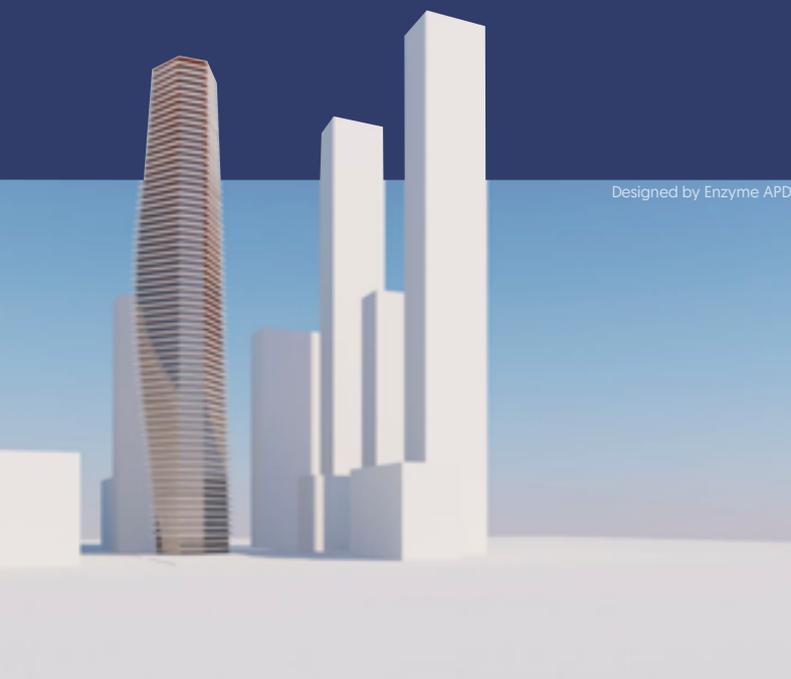
EASY TO LEARN,  
FUN TO USE



## Work, Edit, Think in 3D

ARCHICAD allows you to create and edit building elements in their native 3D environment, work in Perspective and Axonometric views, apply cut-planes to plan- section- elevation model views, adjust the inclination and curves of walls, beams, openings; align with the geometry of the existing elements.

Gain valuable design feedback about your work and make instant, intuitive design decisions based on the actual state of the building model.



## Intuitive Graphical User Interface made by architects for architects

The right tools are always at your fingertips with Pet Palette. The most commonly used editing options/input can be quickly accessed from the Tracker, while numerous on-screen tools enable ultra-fast work (Magic Wand, Intelligent cursor, Gravity, cursor snap guide variants).

Even new users will be familiar with the icons, workflows, and editing methods, which mirror those found in an architectural design practice.

## Algorithmic Design and BIM

The bi-directional Rhino-Grasshopper-ARCHICAD connection enables designers to create free-form, algorithmic designs with the most widely-used and robust tools available, and then translate them into the BIM. Thanks to the live, associative nature of the connection, architects can build versatile workflows and utilize this connection in multiple design scenarios at any stage of the design process — using either Apple macOS or Microsoft Windows platforms.



## Thousands of smart design objects at your fingertips

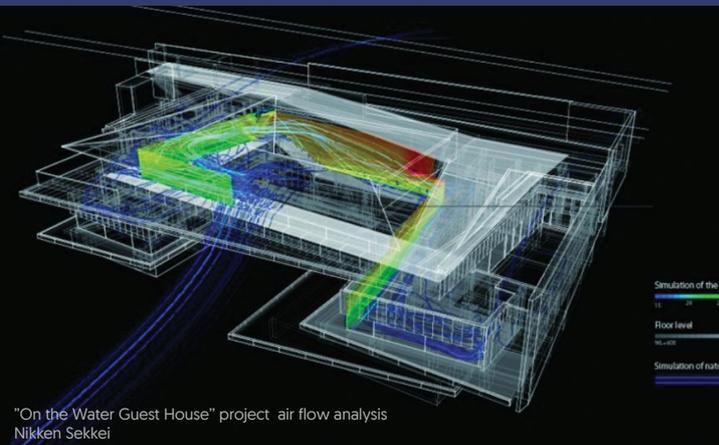
ARCHICAD provides over 3,000 intuitive building objects (Library Parts, Structural Components) right out of the box, localized to national standards and ready to be placed into your design.

The native, parametric library parts can be configured, multiplied or changed to comply with all design requirements without increasing the size of the project or effecting the responsiveness of ARCHICAD. Save your element configurations and use Graphical Favorites for quick, visual access at any time.



# MORE ACCURATE INFORMATION

ARCHICAD PROVIDES EXCLUSIVE TOOLS AND WORKFLOWS FOR STREAMLINED AND ACCURATE INFORMATION MANAGEMENT AND MODEL-BASED DESIGN ANALYSIS AND COORDINATION, ENSURING THAT YOU WILL CATCH THE INCONSISTENCIES THAT COULD CAUSE CONSTRUCTION ISSUES DOWN THE LINE.



"On the Water Guest House" project air flow analysis  
Nikken Sekkei

The **Property Manager** creates and manages custom element property sets reflecting the requirements and specifications of the engineers, consultants or builders. Check the individual design elements' fire resistance ratings, thermal resistance, price or any other specifications at any time.

The **Classifications Manager** implements global element classification standards in your design projects. Such international standards are mandatory when working on municipal, governmental and institutional projects.

**IFC Manager** allows full control of IFC properties and classes enabling you to share only the relevant design information with engineers and consultants.

During the round-trip data exchange, the modified elements will be identified and color-coded.

The built-in **Collision Detection** identifies and lists collisions of various 3D model elements. Coordinate the work of engineers and consultants using various applications.

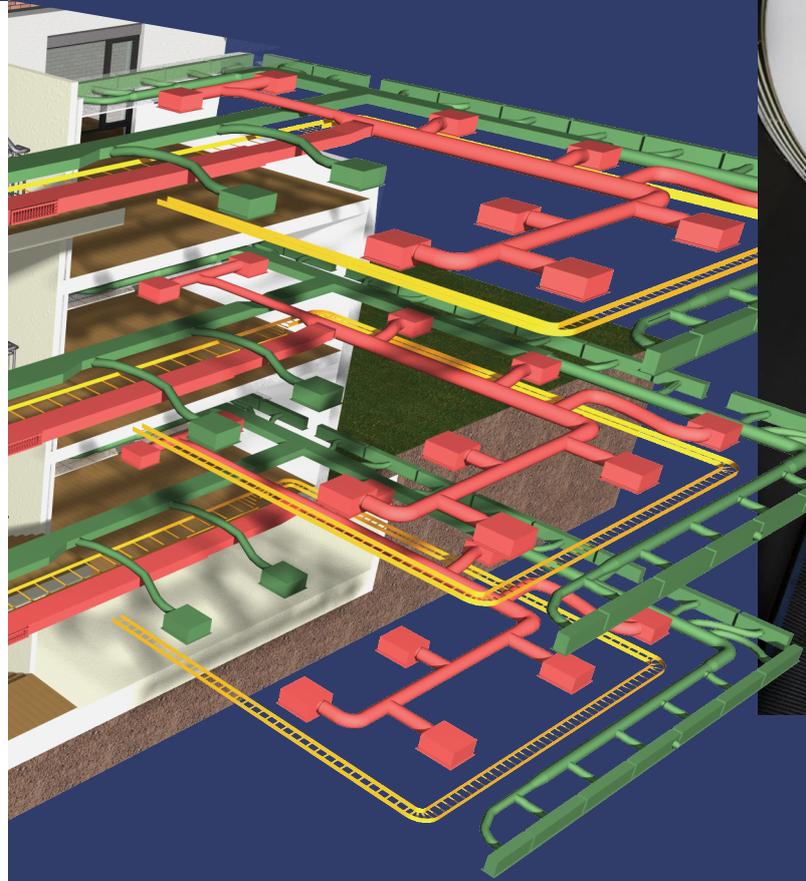
The **Review Manager** automates the project review process and reduces the time spent on a streamlined and accurate information exchange.

The built-in **Energy Analysis** enables architects to perform quick, reliable, and dynamic energy evaluation with standard-compliant technology, without additional training. The generated result sheet displays easy-to-read charts and graphs, helps facilitate informed design decisions and supports design presentations for clients.



# OPEN COLLABORATION

ARCHICAD IMPLEMENTS THE UNIVERSAL OPEN BIM APPROACH BASED ON OPEN STANDARDS AND WORKFLOWS USING THE BUILDINGSMART DATA MODEL, WHICH PROVIDES BENEFITS FOR THE COLLABORATIVE DESIGN, CONSTRUCTION, AND OPERATION OF BUILDINGS.



ARCHICAD is internationally recognized as the BIM solution **providing the most comprehensive IFC import and export**. Users have absolute control to determine all the parameters of the elements to be included in the IFC file. Revision management and color-coded markup tools help round-trip IFC data exchange. Several vendor-specific IFC translators are available out of the box to ensure accurate design information exchange (i.e. Tekla, Revit, DDS-CAD, etc.).

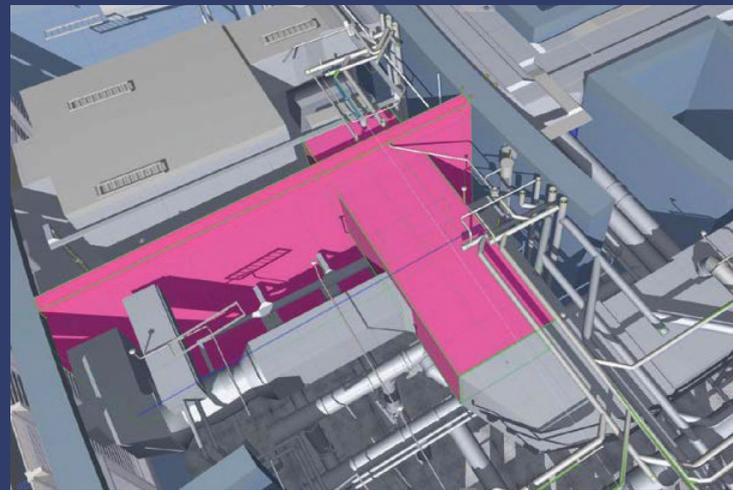
ARCHICAD offers an open and optimized design workflow for **structural engineers** (using, for instance, Tekla, SCIA, SAP2000, ETABS, FEM-Design, Revit Structure, AXIS VM, Tricalc, Cype, Dlubal, Graitec, etc.) – sharing only relevant information about loadbearing structures, while seamlessly integrating changes, modified or deleted elements.

ARCHICAD's 3D Zones contain the relevant information **MEP engineers** (using, for instance, DDS-CAD, CADmep+, MagiCAD, Revit MEP, Design Master, AutoCAD MEP, Plancal, CADs planner, etc.) need to get started. Complex MEP systems can be integrated with the ARCHICAD model as native elements.

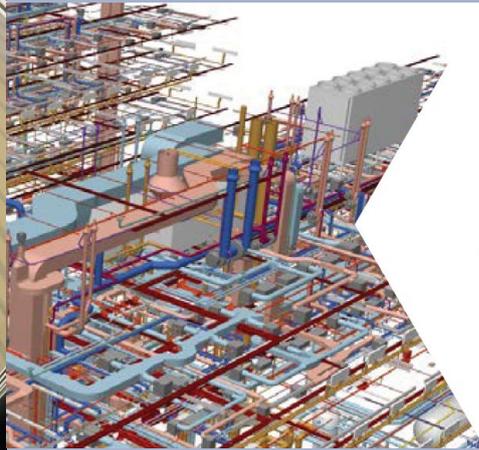
ARCHICAD **reads and writes** various point-cloud, raster- and vector-based drawings and images, as well as model-based, 3D file formats (i.e. DWG, DWF, DXF, DGN, 3DS, 3DM, OBJ, FACT, VRL, LP, SKP, U3D, KMZ, STL, PSD, PDF, EMF, WMF, BMP, JPG, GIF, TIF, PNG).

ARCHICAD supports Bentley MicroStation's native, DGN v8 file format. DGN files are typically provided to architects by civil engineers, surveyors and municipalities, and contain information about the building site's surroundings, roads, and utilities. In many cases, the 3D survey models of factories are also made available to architects as DGN files.

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The **ARCHICAD-Solibri** connection enables seamless code- and constructability checking at any stage of the design. The updated add-on automatically detects and sends only those elements in the ARCHICAD model that have been changed, resulting in faster round-trip collaboration.



**ARCHICAD with BIMcloud** provides real-time, secure, model-based teamwork between architects, regardless of the size of the design project, the location of the offices, or the speed of the Internet connection. BIMcloud works on any network, hardware or software configuration. With the help of its mobile integration through the cloud, all stakeholders of the design-build process can stay connected 24/7. The patented Delta Server technology ensures that network traffic — as well as waiting times — are practically reduced to zero, because only the changed elements are exchanged between workstations. User profiles ensure appropriate access rights for every project stakeholder. Color-coded workspaces indicate the reserved elements, while built-in, real-time messaging enables efficient team communication between all disciplines.

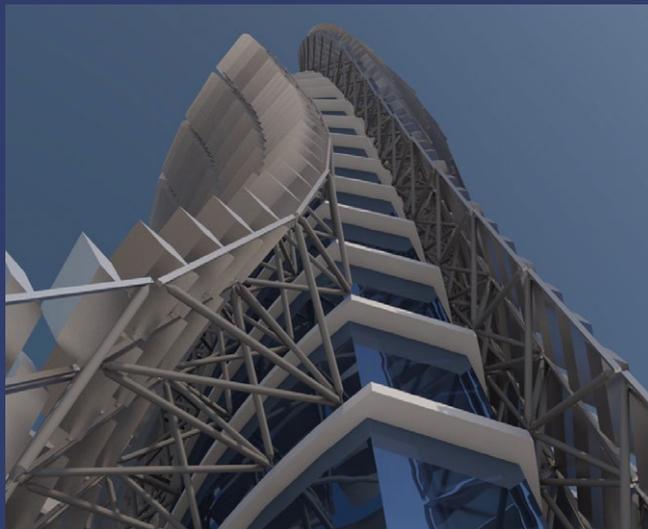
The **ARCHICAD-dRofus** connection allows architects to capture and organize client planning requirements and use these to validate and propose design alternatives. The dRofus database enables designers to collect and handle planning rules and design data with ease, even when working on large and complex projects.

The **Rhino-Grasshopper-ARCHICAD Toolset** connects the best tools for the different design stages and closes the gap between early stage design and Building Information Modeling. A free add-on enables Rhino/Grasshopper and ARCHICAD to communicate directly in order to create and manipulate a BIM model in full or in part, through Grasshopper's visual scripting interface. The toolset offers solutions for seamless, bi-directional geometry transfer as well, as a way to translate basic geometrical shapes into full BIM elements while adding algorithmic editing functionality.

Interactive BIMx Hyper-model on a mobile device



**GRAPHISOFT's multi-award winning BIMx**, the BIM-based design communication tool for projects of any size on mobile devices and on the Internet, makes unique, 2D and 3D interactive project presentations possible and — thanks to BIMcloud — a real-time collaboration workflow between the design studio, the client, and the construction site. The free BIMx application is available for both Android or iOS mobile devices, enabling an interactive and immersive way to explore the design project. Intelligent Markers in the model represent hyperlinks to the 2D layout sheets. Hypermodels can be shared with anybody given a link or integrated on the architect's own website.



# ARCHICAD PERFORMS

ARCHITECTS AROUND THE WORLD ENJOY THE PERFORMANCE DELIVERED BY ARCHICAD, INCLUDING THE ABILITY TO HANDLE LARGE AND COMPLEX PROJECTS, AND INCREASED RESPONSIVENESS WITH SEAMLESS AND UNINTERRUPTED WORKFLOWS.

## Instant Model Updates

**ARCHICAD's predictive background processing** enables you to generate instant model updates on any part of the model by anticipating what you might do next and preparing for it in the background. It is also used by ARCHICAD to check the status of external reference files and drawings, while server communication is carried out in a separate thread. This results in faster feedback and dramatically reduces response times, enhancing general responsiveness.

## Smoother/faster 3D navigation

Thanks to the optimized OpenGL, ARCHICAD ensures smooth and lightning-fast navigation – even on extremely large building models.

## Responsiveness

ARCHICAD is extremely responsive, thanks to the improved Startup / Open process. Now, you can get straight to work without any interruptions; ARCHICAD will collect and address all the dialogs under an 'information center' for you to manage at your convenience. Tab previews make the View Change process easier, while faster model imports and exports support an efficient data exchange. In addition, reduced project sizes allow faster file opens, as well as faster drawing updates.

## 64 bit computing

Working on large and complex models is not a problem for ARCHICAD, which effectively utilizes all the RAM your computer has and enables you to work on projects of any size and scope. ARCHICAD's robust 64-bit architecture enables the display of large models, while optimized scaling of multiple-core CPUs boosts performance when working on large, complex projects.

## Multi-threading

ARCHICAD takes advantage of multiple cores and processors in various computing-intensive areas. Multi-threading allows faster generation of Sections, Elevations and 3D displays; faster drawing updates and renderings; smooth panning and zooming; file saving with data compression option. In order to offer a better Teamwork experience, BIMcloud is also multi-threaded, resulting in faster sending and receiving of updated elements and messages.

# AUTOMATED DOCUMENTATION

**Interactive, Graphical Element Schedules** are not only for providing a list of building components in your design — illustrated with the real 2D and 3D preview of any elements (not only library parts), but also for editing the design; any changes entered in the interactive schedules (i.e. changing the dimensions of openings, etc.) will be instantly reflected in other model views as well.

**Construction Materials** are for configuring the layers of composite structures for faster modeling, and more accurate and faster detail drawing generation; you can also adjust the **Intersection priorities** of materials and ensure that all quantity estimations are accurate for all layers of composite structures as well.

**3D Documents** - perspective cutaways — generated from the design model — extended with associative dimensions, texts, and labels take construction documentation to the next level and greatly help construction professionals to fully understand design intent.

ARCHICAD's **Project Browser** provides instant and organized access to all model views, layouts, detail drawings, schedules, and element lists. Custom folder structures, view settings and model display configurations [scale, zoom, pen-set, partial structure display, MVO, graphic override] ensure that your design is displayed and documented as design- and engineering teams, constructors or municipalities require it.

**BIMx Web Viewer** works with all common Internet browsers and lets you access the full content of any BIMx Hyper-model without having to install any application or plug-in. Your client can explore and navigate in the 3D building design — it's just like playing a computer game.

Interactive BIMx Hyper-model on a mobile device



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MAKES CHANGES  
FAST AND EASY



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The **Publisher** collects, organizes, automates and simplifies the repeated and consistent output of customized documentation sets in a variety of formats, including conventional 2D (i.e. DWG, PDF) and 3D (i.e. IFC, BIMx) formats.

ARCHICAD's built-in **CineRender** rendering engine was developed by Maxon and enables the creation of professional, photo-realistic renderings without the need for professional expertise.

ARCHICAD: Revisiting | Visualization — New opportunities for architects | Architect: Svetlana Kravchenko





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