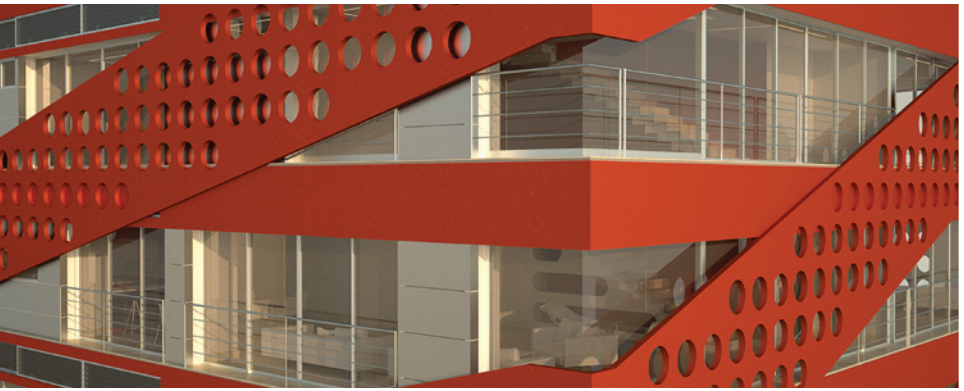
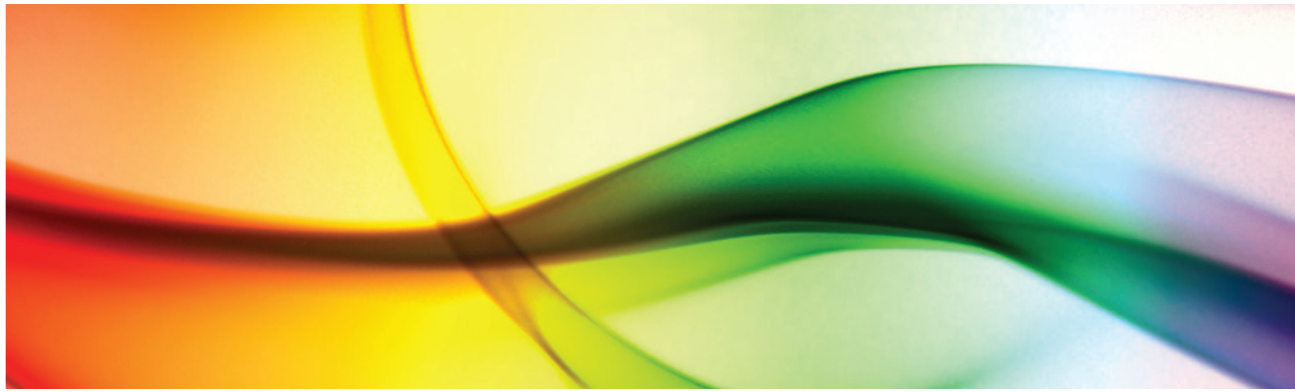
NEMETSCHEK Vectorworks

Vectorworks Architect | Better Designs with Better BIM





We've Done BIM Better

With Vectorworks® Architect 2011 software, you can create building information models without giving up the ease of design you're used to. Whether you're looking to streamline costs, analyze materials, increase your energy efficiency, or just create world-class designs, with the Vectorworks Architect solution, BIM just works. Enjoy the robust and flexible capabilities of BIM with the ease of design, great documentation, and intelligent tools that the software is known for—right from the start.

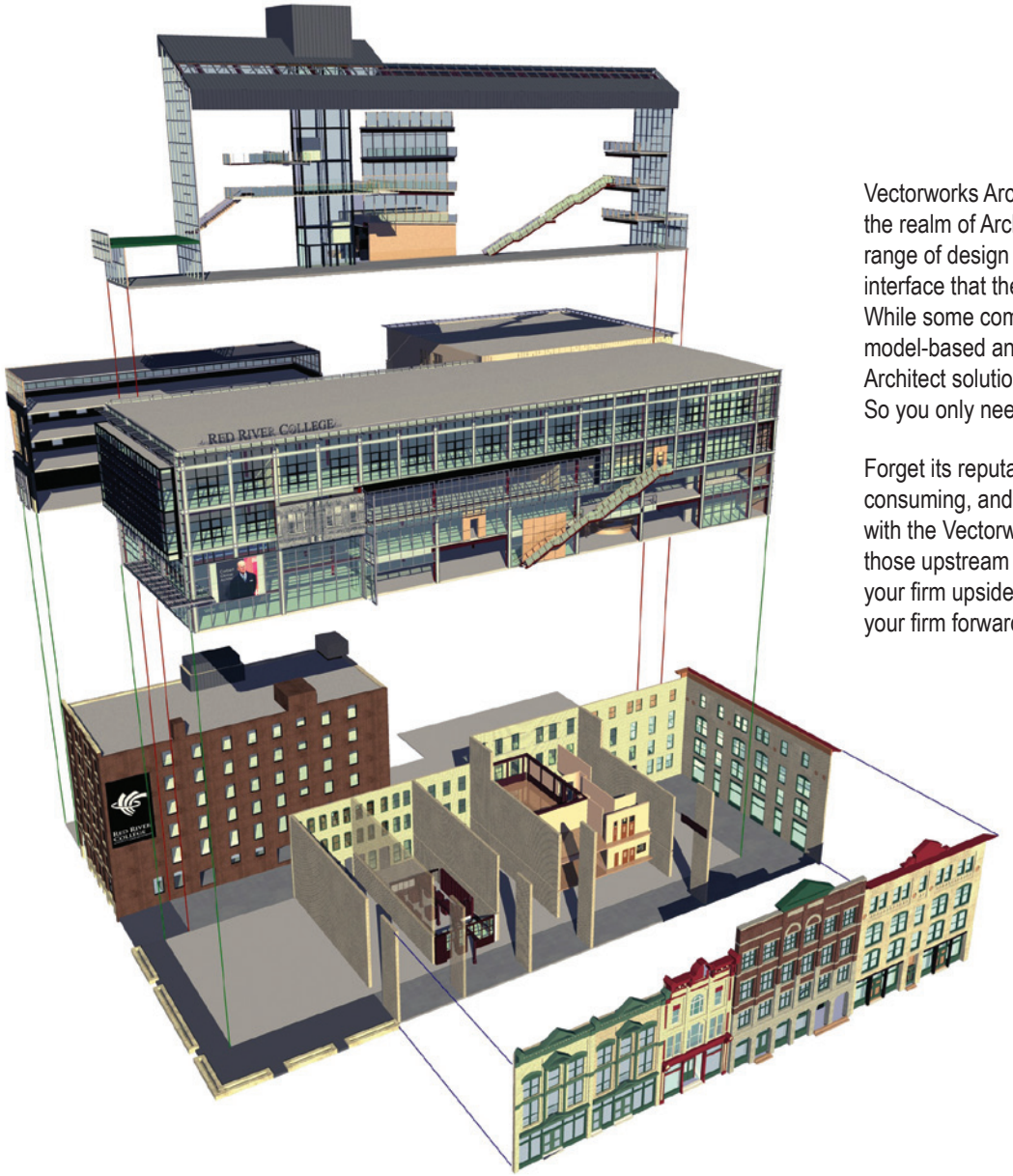
Vectorworks Architect 2011 software is flexible, so your workflow is continuous—you can get to BIM from wherever you are in the design process. It's versatile, since just one application addresses all phases of design.

It's intuitive, so you can work the way you think. And it's a smart investment with robust feature sets. The Vectorworks Architect design tools help you create, model, analyze, and present—all within a BIM framework.

With its unique Parasolid® modeling kernel from Siemens PLM Software, the Vectorworks Architect program has mastered BIM with design and presentation capabilities and arguably the best 3D modeling core in the business. So you can create almost any shape imaginable and maintain a parametric model with the Dimensional Constraint Manager functionality. Everything is associated, so all geometry links to dimensions and vice versa. With the click of a mouse, all views are updated... all at once!

What exactly is BIM?
There are several ways to define BIM.
(Building Information Modeling)

- *"BIG BIM,"* also known as Integrated Project Delivery (IPD): A business model for design,execution, and delivery of buildings by collaborative, integrated, and productive teams composed of key project participants. Building upon early-phase contributions of team members' expertise, these teams are guided by principles of trust, transparent processes, effective collaboration, open information sharing, team success tied to project success, shared risk and reward, value-based decision making, and utilization of full technological capabilities and support. The outcome is the opportunity to design, build, and operate as efficiently as possible. The goal of IPD is to reduce errors, waste, and cost during the entire design, construction, and occupancy process.
- *"little bim"*: A design process in which the 2D plan, 3D model, and all associated design and construction information are linked in a single digital representation. A design is built as a 3D model. The components of the construction information—all plans, elevations, perspectives, technical sections, and plans are derived from this associated 3D model. This 3D model can be exchanged in whole or in part with other stakeholders in the "big BIM" process.

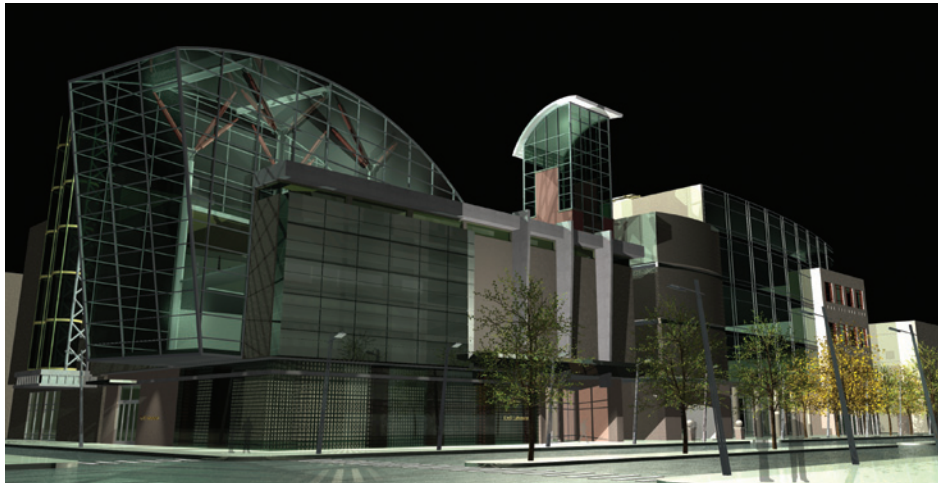


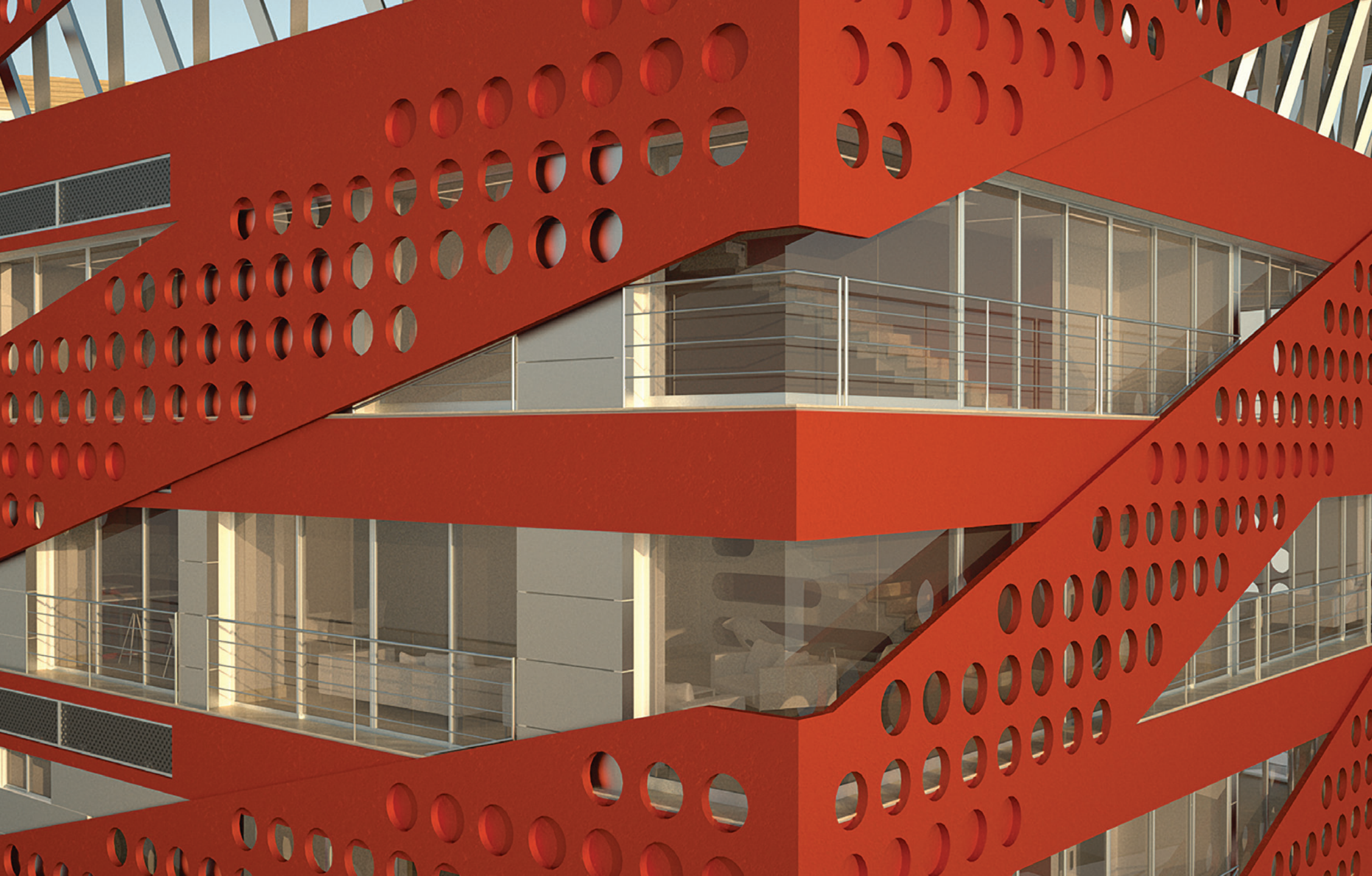
Vectorworks Architect software is a premier BIM provider in the realm of Architecture. No other BIM application offers the full range of design capabilities from start to finish or the user-friendly interface that the all-about-design Vectorworks application does. While some competitors devise separate, complex tool sets for model-based and drawing-centric workflows, the Vectorworks Architect solution uses an interface that's consistent for both. So you only need to know one application.

Forget its reputation for being daunting, frustrating, time-consuming, and expensive. BIM can be simpler than you think—with the Vectorworks product line. It aptly serves the needs of those upstream and downstream from you. So you won't turn your firm upside down by incorporating BIM—you'll propel your firm forward.

BIM's a Win-Win
With Vectorworks BIM, you'll discover:

- Freedom to design with no restrictions
- A very flexible workflow
- Open and interoperable exchange of information with various stakeholders
- An optimized approach with virtual modeling and analysis that reduces change orders and delivery time and lowers operating and sustainment costs

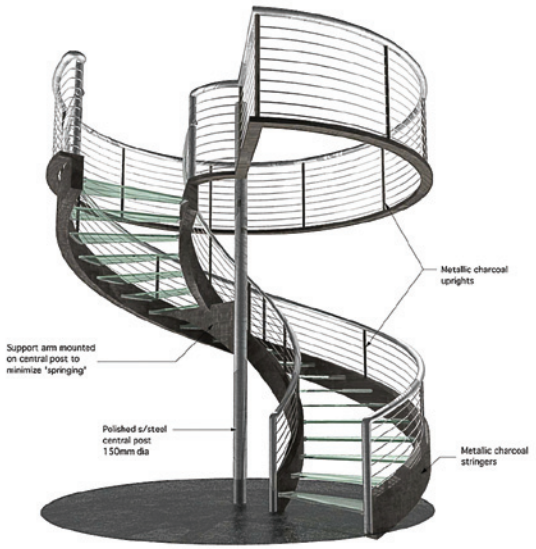


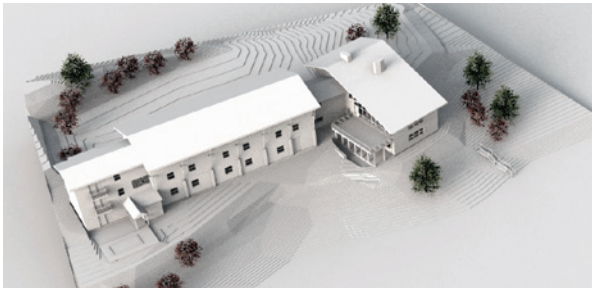


Where BIM Comes In

Renew Your Creative License

Here's where the Vectorworks Architect program really shines. If you can dream a shape, you can make it. Model freeform, organic building forms at the conceptual and detailed design stages. Whether you're creating building shells, building components, or building fixtures and furnishings, you can model them at any stage, at any time, and at any level of detail. With the power of the Parasolid modeling engine, you'll have easy-to-use tools for extrusions, surfaces of rotation, sweeps, NURBS curves and surfaces, variable edge radiusing, protrusion, shape projection, shelling, drape surfaces, manifold solids from surfaces, and constructive solid geometry. The only limit is your imagination.



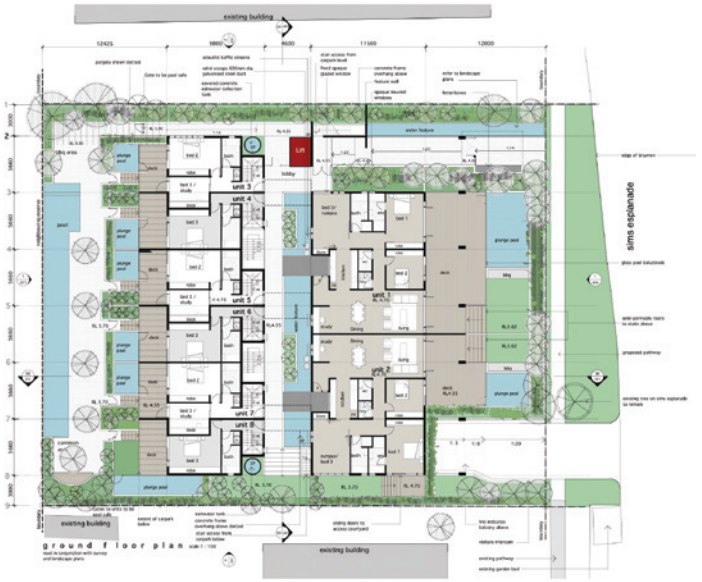


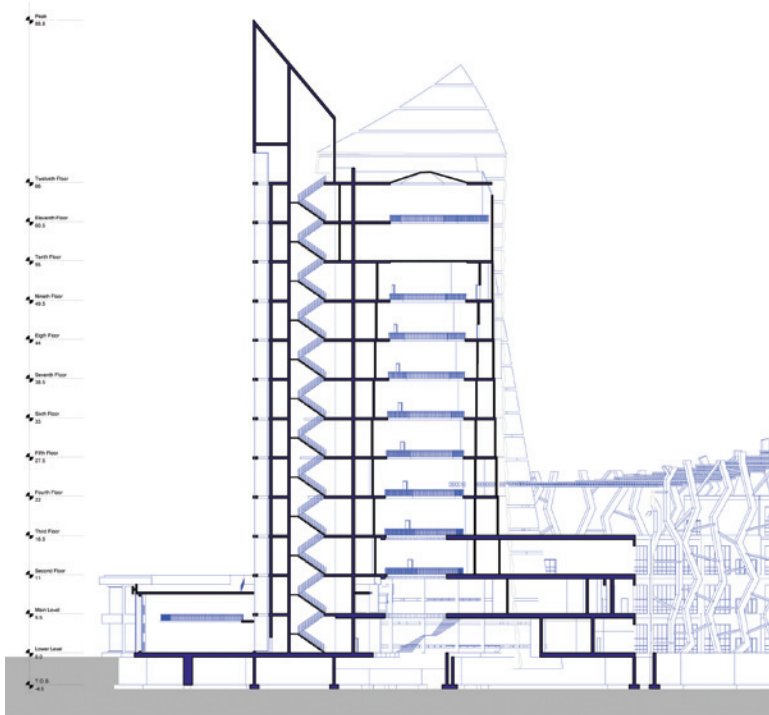
With Intelligent Objects, Your Designs are Smarter Too

With the software's "open-ended intelligent design," complex forms can be recognized or specified as building components and not just geometry; so they can be communicated in the correct syntax. Even a complex form can be assigned its semantic building identity, so that the entire IFC 2x3 data structure applies to any non-identified geometry in the model. So if you create a free-form object and assign IFC data sets, it can intelligently be shared "downstream." Talk about smart.

Make Change Easy

You're in control of your design. With this completely parametric program, change made to one element changes associated elements automatically, reducing human errors, and saving you great time and money. For instance, walls can be dynamically linked to the height of the story they occupy. Walls "know" about the walls they're joined to, and thus maintain a network of walls that can be drag-edited and reshaped, and objects inserted into walls know the height, thickness, material layers, and other information about that wall; they accommodate changes when the wall is reset. With all of these automatic accuracy checks, you make the change, and the software makes it work.



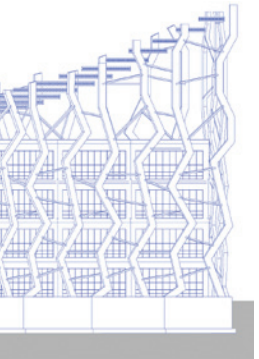


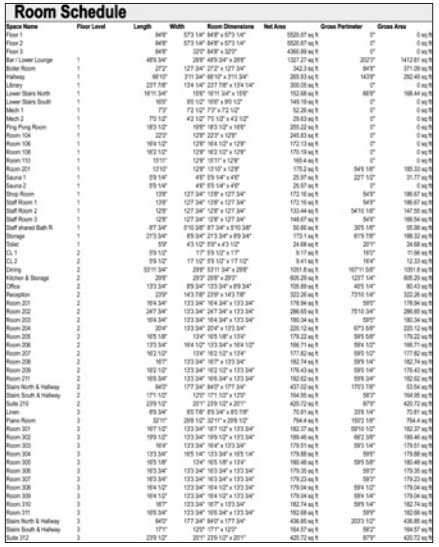
Work Well with Others
The Vectorworks Architect application can easily import and export IFC 2x3 files. With our intuitive modeling tools, you can create any architectural element you dream up and then export it to IFC with full data fidelity.

Your Vectorworks Architect BIM model can also be used for construction. If you create millwork with InteriorCAD, you'll have direct fabrication control of CNC cutting machines. Any 3D solid created in the product may be rapid-prototyped on 3D printing devices for manufacturers. The application can export 3D solids to all other Parasolid-kernel-based applications (e.g. SolidWorks) using the X_T file format, so our models seamlessly move into manufacturing and advanced mechanical design systems.

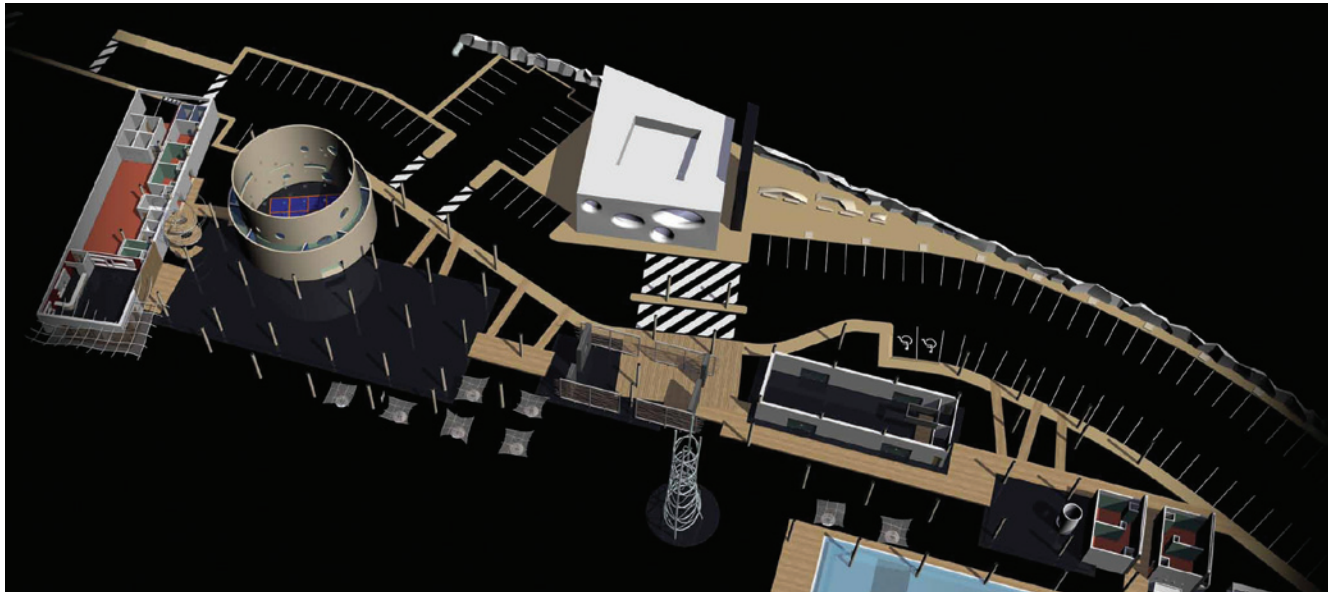
We've tested the Vectorworks application's model and data exchange against these and other programs:

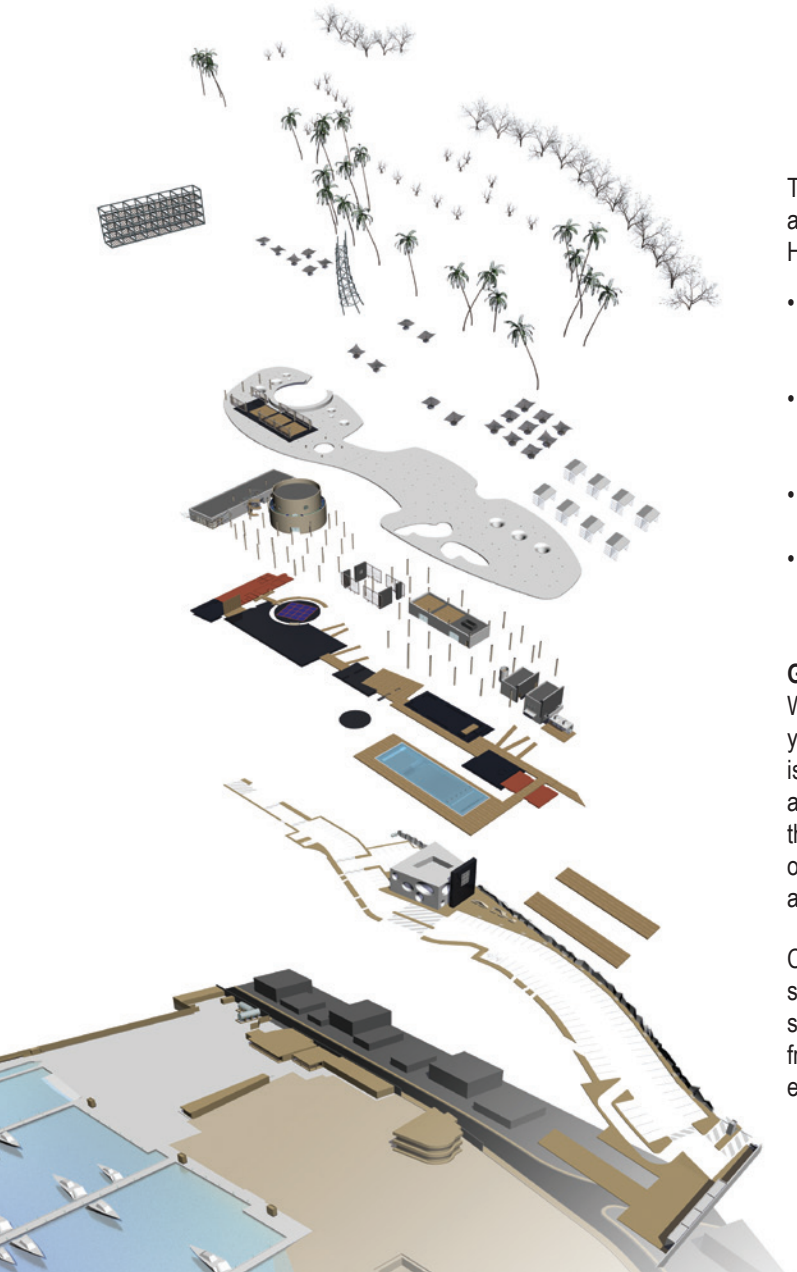
- Scia Engineer [Structural] (IFC 2x3)
- Tekla [Structural] (IFC 2x3)
- MagiCAD® [MEP] (IFC 2x3)
- DDS-CAD® (IFC 2x3)
- ArchiCAD (IFC 2x3)
- Bentley Microstation (IFC 2x3)
- AutoCAD® Architecture (IFC 2x3)
- Revit® 2010 (IFC 2x3)
- Solibri Model Checker™ (IFC 2x3)
- NavisWorks® (IFC 2x3)




Room Schedule

Space Name	Floor Level	Length	Width	Room Dimensions	Net Area	Gross Perimeter	Gross Area
Foor 1		84'9"	57'3 1/4" 84'9" x 57'3 1/4"		5520.87 sq ft	0"	0 sq ft
Foor 2		84'9"	57'3 1/4" 84'9" x 57'3 1/4"		5520.87 sq ft	0"	0 sq ft
Foor 3		84'9"	32'5" 84'9" x 32'5"		4360.89 sq ft	0"	0 sq ft
Bar / Lower Lounge	1	489'3/4"	289'4" 489'3/4" x 289'4"		1327.27 sq ft	2027'7"	1412.81 sq ft
Boiler Room	1	27'2"	12'7 3/4" 27'2" x 12'7 3/4"		342.3 sq ft	84'9"	371.09 sq ft
Hallway	1	66'10"	3'11 3/4" 66'10" x 3'11 3/4"		265.93 sq ft	143'8"	282.49 sq ft
Library	1	237'7/8"	134'1/4" 237'7/8" x 134'1/4"		300.05 sq ft	0"	0 sq ft
Lower Stairs North	1	16'11 3/4"	15'6" 16'11 3/4" x 15'6"		152.68 sq ft	66'8"	168.44 sq ft
Lower Stairs South	1	16'6"	9'0 1/2" 16'6" x 9'0 1/2"		149.19 sq ft	0"	0 sq ft
Mech 1	1	7'3"	7'2 1/2" 7'3" x 7'2 1/2"		52.26 sq ft	0"	0 sq ft
Mech 2	1	7'0 1/2"	4'2 1/2" 7'0 1/2" x 4'2 1/2"		29.63 sq ft	0"	0 sq ft
Ping Pong Room	1	18'3 1/2"	16'5" 18'3 1/2" x 16'5"		255.22 sq ft	0"	0 sq ft
Room 104	1	23'2"	12'8" 23'2" x 12'8"		245.83 sq ft	0"	0 sq ft
Room 106	1	16'4 1/2"	12'8" 16'4 1/2" x 12'8"		172.13 sq ft	0"	0 sq ft
Room 108	1	16'2 1/2"	12'8" 16'2 1/2" x 12'8"		170.19 sq ft	0"	0 sq ft
Room 110	1	15'11"	12'8" 15'11" x 12'8"		165.4 sq ft	0"	0 sq ft
Room 201	1	12'10"	12'8" 12'10" x 12'8"		175.2 sq ft	54'6 1/8"	185.33 sq ft
Sauna 1	1	5'9 1/4"	4'6" 5'9 1/4" x 4'6"		25.97 sq ft	22'7 1/2"	31.77 sq ft
Sauna 2	1	5'9 1/4"	4'6" 5'9 1/4" x 4'6"		25.97 sq ft	0"	0 sq ft
Shop Room	1	13'8"	12'7 3/4" 13'8" x 12'7 3/4"		172.16 sq ft	54'8"	186.67 sq ft
Staff Room 1	1	13'8"	12'7 3/4" 13'8" x 12'7 3/4"		172.16 sq ft	54'8"	186.67 sq ft
Staff Room 2	1	12'8"	12'7 3/4" 12'8" x 12'7 3/4"		133.44 sq ft	5410 1/8"	147.55 sq ft
Staff Room 3	1	12'8"	12'7 3/4" 12'8" x 12'7 3/4"		148.67 sq ft	54'6"	168.54 sq ft
Staff shared Bath R	1	8'7 3/4"	8'10 3/8" 8'7 3/4" x 8'10 3/8"		69.66 sq ft	30'5 1/8"	75.98 sq ft
Storage	1	21'3 3/4"	8'9 3/4" 21'3 3/4" x 8'9 3/4"		173.1 sq ft	61'9 7/8"	186.32 sq ft
Toilet	1	5'9"	4'3 1/2" 5'9" x 4'3 1/2"		24.68 sq ft	20'1"	24.68 sq ft
CL 1	2	5'9 1/2"	1'7" 5'9 1/2" x 1'7"		9.17 sq ft	16'5"	11.66 sq ft
CL 2	2	5'9 1/2"	1'7 1/2" 5'9 1/2" x 1'7 1/2"		9.41 sq ft	16'4"	12.33 sq ft
Dining	2	53'11 3/4"	29'6" 53'11 3/4" x 29'6"		1091.8 sq ft	167'11 5/8"	1091.8 sq ft
Kitchen & Storage	2	29'6"	29'2" 29'6" x 29'2"		609.29 sq ft	123'7 1/4"	609.29 sq ft
Office	2	13'3 3/4"	8'9 3/4" 13'3 3/4" x 8'9 3/4"		105.89 sq ft	40'5 1/4"	80.43 sq ft
Reception	2	23'9"	14'3 7/8" 23'9" x 14'3 7/8"		322.26 sq ft	73'10 1/4"	322.26 sq ft
Room 201	2	16'4 3/4"	12'3 3/4" 16'4 3/4" x 12'3 3/4"		178.94 sq ft	59'5"	178.94 sq ft
Room 202	2	24'7 3/4"	12'3 3/4" 24'7 3/4" x 12'3 3/4"		286.65 sq ft	75'10 3/4"	286.65 sq ft
Room 203	2	16'4 3/4"	12'3 3/4" 16'4 3/4" x 12'3 3/4"		180.34 sq ft	59'5"	180.34 sq ft
Room 204	2	20'4"	12'3 3/4" 20'4" x 12'3 3/4"		220.12 sq ft	67'3 5/8"	220.12 sq ft
Room 205	2	16'5 1/8"	13'4" 16'5 1/8" x 13'4"		179.22 sq ft	59'5 5/8"	179.22 sq ft
Room 206	2	13'3 3/4"	16'4 1/2" 13'3 3/4" x 16'4 1/2"		166.71 sq ft	59'4 1/2"	166.71 sq ft
Room 207	2	16'2 1/2"	13'4" 16'2 1/2" x 13'4"		177.82 sq ft	59'5 1/2"	177.82 sq ft
Room 208	2	16'7"	13'3 3/4" 16'7" x 13'3 3/4"		182.74 sq ft	59'9 1/4"	182.74 sq ft
Room 209	2	16'2 1/2"	13'3 3/4" 16'2 1/2" x 13'3 3/4"		176.43 sq ft	59'5 1/4"	176.43 sq ft
Room 211	2	16'5 3/4"	13'3 3/4" 16'5 3/4" x 13'3 3/4"		182.62 sq ft	59'8 3/4"	182.62 sq ft
Stairs North & Hallway	2	84'0"	17'7 3/4" 84'0" x 17'7 3/4"		437.02 sq ft	173'3 7/8"	53.54 sq ft
Stairs South & Hallway	2	17'1 1/2"	12'5" 17'1 1/2" x 12'5"		164.95 sq ft	59'2"	164.95 sq ft
Suite 210	2	23'9 1/2"	20'1" 23'9 1/2" x 20'1"		420.72 sq ft	87'9"	420.72 sq ft
Linen	3	8'9 3/4"	8'0 7/8" 8'9 3/4" x 8'0 7/8"		70.81 sq ft	33'8 1/4"	70.81 sq ft
Piano Room	3	32'11"	29'8 1/2" 32'11" x 29'8 1/2"		764.4 sq ft	159'2 1/8"	764.4 sq ft
Room 301	3	16'7 1/2"	13'3 3/4" 16'7 1/2" x 13'3 3/4"		182.37 sq ft	59'10 1/2"	182.37 sq ft
Room 302	3	19'9 1/2"	13'3 3/4" 19'9 1/2" x 13'3 3/4"		189.46 sq ft	66'2 3/8"	189.46 sq ft
Room 303	3	16'4"	13'3 3/4" 16'4" x 13'3 3/4"		179.51 sq ft	59'3 1/4"	179.51 sq ft
Room 304	3	13'3 3/4"	16'5 1/4" 13'3 3/4" x 16'5 1/4"		179.88 sq ft	59'6"	179.88 sq ft
Room 305	3	16'5 1/8"	13'4" 16'5 1/8" x 13'4"		180.48 sq ft	59'5 5/8"	180.48 sq ft
Room 306	3	16'3 3/4"	13'3 3/4" 16'3 3/4" x 13'3 3/4"		179.35 sq ft	59'2"	179.35 sq ft
Room 307	3	16'3 3/4"	13'3 3/4" 16'3 3/4" x 13'3 3/4"		179.23 sq ft	59'2"	179.23 sq ft
Room 308	3	16'4 1/2"	13'3 3/4" 16'4 1/2" x 13'3 3/4"		179.04 sq ft	59'4 1/2"	179.04 sq ft
Room 309	3	16'4 1/2"	13'3 3/4" 16'4 1/2" x 13'3 3/4"		179.04 sq ft	59'4 1/4"	179.04 sq ft
Room 310	3	16'7"	13'3 3/4" 16'7" x 13'3 3/4"		182.74 sq ft	59'9 1/4"	182.74 sq ft
Room 311	3	16'8 3/4"	13'3 3/4" 16'8 3/4" x 13'3 3/4"		182.68 sq ft	59'9"	182.68 sq ft
Stairs North & Hallway	3	84'0"	17'7 3/4" 84'0" x 17'7 3/4"		436.85 sq ft	203'3 1/2"	436.85 sq ft
Stairs South & Hallway	3	17'1"	12'5" 17'1" x 12'5"		164.57 sq ft	59'2"	164.57 sq ft
Suite 312	3	23'9 1/2"	20'1" 23'9 1/2" x 20'1"		420.72 sq ft	87'9"	420.72 sq ft





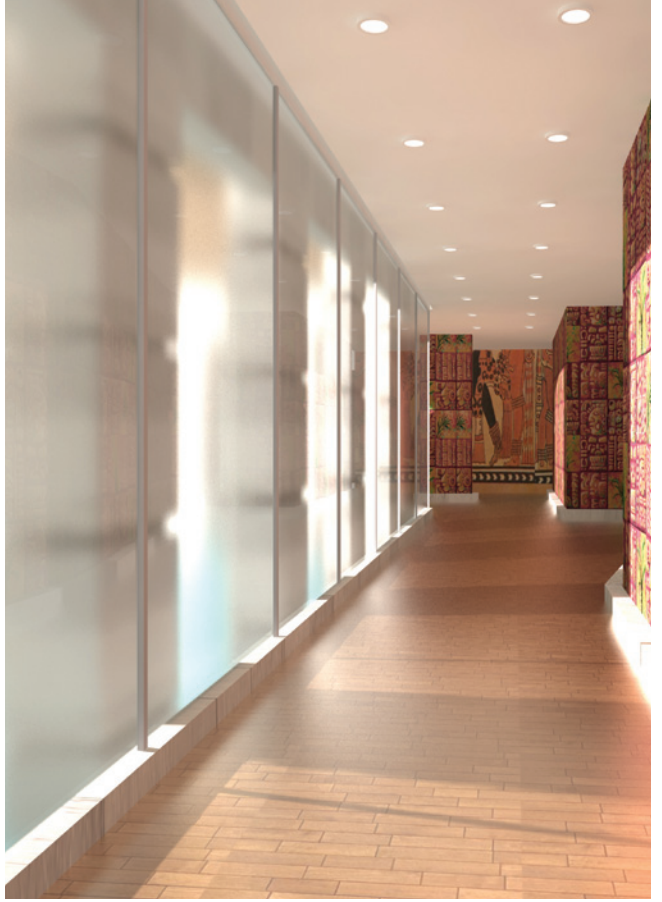
The software integrates smoothly with other disciplinary applications, including structure, MEP, and civil engineering. Here are a few examples:

- Landscape architecture, urban planning, GIS (shapefiles): Use the Vectorworks Landmark product with a VWX file exchange
- Complete 2D and 3D machine parts and mechanical components: Use the Vectorworks product with a VWX file exchange
- Millwork/Cabinetry design and CAM production: Use InteriorCAD with a VWX file exchange
- Land planning and subdivision layout: Use Land Planning with a VWX file exchange

Get Built-In BIM Content

When you receive your Vectorworks Architect 2011 software, you'll discover a vast collection of architectural BIM content that is continually growing, thanks to our prolific content staff. The application supports a large variety of ready-made BIM objects that feature embedded IFC data to ensure competent export to open-standards-based BIM applications, and they enable quick and accurate detailed architectural design.

Choose from equipment, appliances, furniture and fixtures, HVAC, sanitary fixtures, steel structural shapes, concrete structural shapes, as well as space, wall, slab/floor, roof/roof face, column, framing member, window wall/storefront, door, window, stair, ramp, electrical objects, and many, many more. You'll see premium



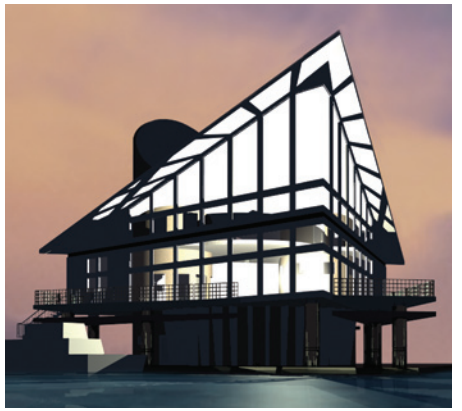
manufacturers like Sub-Zero, Wolf, AGA, Herman Miller, Knoll™, Marvin® Windows and Doors, Jeld-Wen® Windows and Doors, Loewen, and Kohler®.

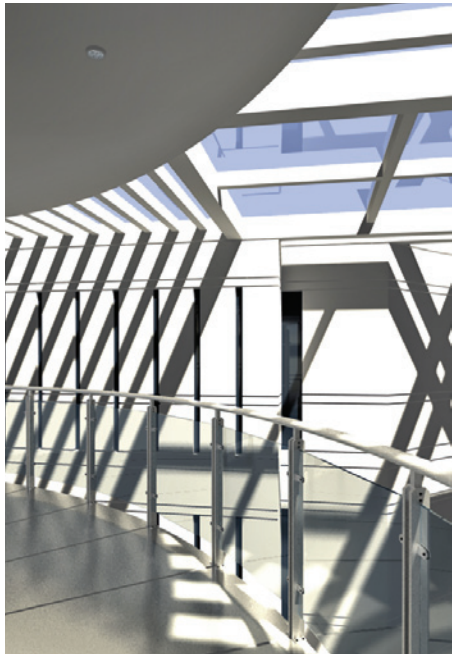
And if you want to create something that you you don't see in our content libraries, it's easy to do so with our freeform, parametric tools. With the "Create Symbol" command, you've created a coordinated 2D / 3D symbol. Just add IFC data to that symbol definition and you're done. The resulting object is a resource that you can share and reference among an entire office. It's that easy.

Render in the Best Light
We've built a state-of-the-art rendering engine called Renderworks, that works seamlessly with our Vectorworks software. So you'll enjoy world-class designs that beautifully integrate artistic and photorealistic effects and also perform animations like walk-throughs and orbital and solar simulations. Use it for advanced sky, area, and goniometric light sources that can be rendered or updated over 100 times faster than conventional ray-tracer engines. Get ready for accurate, compelling designs that really shine.

Customize Your Work
The Vectorworks application features two customization APIs to create point-defined, line-defined, or area-defined parametric architectural objects, menu commands, and other tools. VectorScript™, a "lightweight" scripting language that manages many programming functions for the user (e.g. memory management) excels at rapid prototyping of features and office-standard issues. The more complex C++ based API offers more flexibility for building data structures, debugging tools, and maintaining operating system infrastructure. We also provide a command for the non-programming user for generating prototype VectorScripts that can be changed easily.

Get Your Team Together
The Vectorworks Architect solution supports distributed teams and work processes. With a flexible file-based form of what we call "workgroup referencing," one person can edit each file at a time, and any number of files may be combined into a unified project file. The user establishes the updating protocol, and changes are updated on command. With a coordinated workflow, everyone moves forward together.





Cross Platform
The software runs on Windows XP SP3, Windows Vista SP2, Windows 7, and Mac OS X 10.5.7 and later.

Pricing and Licensing
We offer very competitive pricing and licensing options. You may purchase professional licenses on a per-seat basis. The licenses are flexible—they're easy to manage in a multiple-user format and can be easily managed on networks. We honor a discounted rate and network licensing options for schools. Students are eligible to receive a free copy of Vectorworks software from student.vectorworks.net.

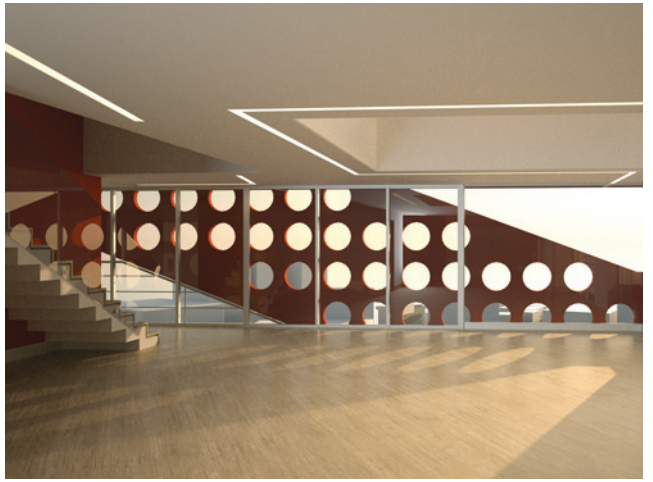
Pricing varies by country, and some countries provide added tools and functionality to the Vectorworks software in their languages. For more information, check out www.vectorworks.net/international.

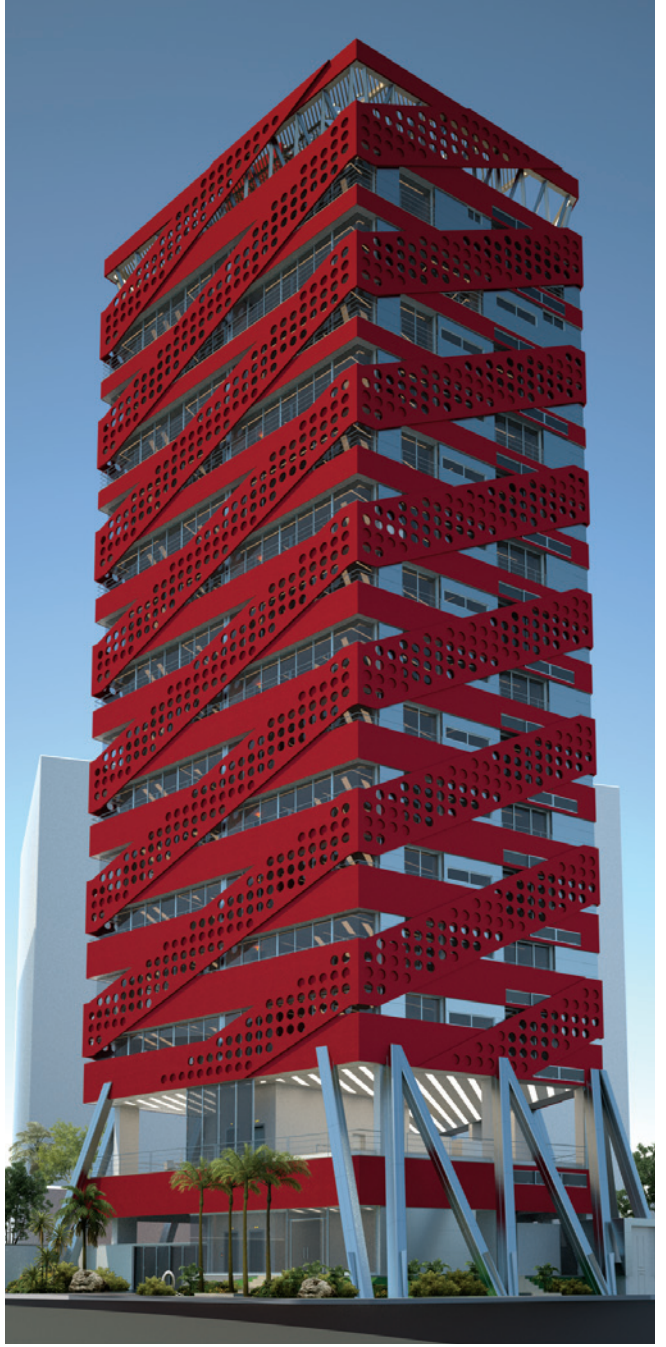
We're Here for You
Nemetschek North America's technical support upholds a reputation for providing responsive quality service and support. We provide free technical support over the telephone or e-mail to any user with an active license for one of the two most recent versions. And we constantly post high-quality, free support resources online to supplement an active community board and knowledge base system. Check out techboard.nemetschek.net and kbase.nemetschek.net.

Support offerings vary by country. For more information, visit www.vectorworks.net/international.

BIM is Better with Vectorworks Architect 2011
Vectorworks Architect software makes BIM better. It keeps its continued focus on design first, and BIM provides added efficiencies, accuracy, and the ability to work fluidly with upstream or downstream colleagues. With the Vectorworks Architect 2011 solution, you'll enjoy limitless design backed by cutting-edge technology. And you'll discover how good BIM can really be.

Vectorworks Architect
Realize Your Most Inspired Visions





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