

## BIM AND ITS RISKS FOR THE DESIGN PROFESSIONAL

**RISK IS BORN OF RELIANCE. AS SOON AS BUSINESSES START TO RELY ON A NEW TOOL OR TECHNOLOGY, THEY'RE EXPOSED TO THE RISK THAT SOMETHING WILL GO WRONG. THIS IS THE CASE FOR DESIGN PROFESSIONALS AND THEIR NOW WIDESPREAD RELIANCE ON BUILDING INFORMATION MODELING (BIM) SOFTWARE. DESIGN PROFESSIONALS SHOULD BE AWARE OF THE EXPOSURES THAT BIM BRINGS AND WHAT THEY CAN DO TO MITIGATE OR TRANSFER THOSE RISKS. BUT FIRST, A BRIEF HISTORY.**

### FROM CAD TO BIM

About a decade ago, computer-aided design (CAD) replaced traditional drafting methods and changed the way business was conducted in the construction industry. Engineering companies began referring to the new CAD system, which facilitates exchange and interoperability of information in digital format, as information modeling or data modeling.

CAD technology rapidly evolved over the next 10 years, and today the marketplace offers a variety of design software packages. Products range from the old 2-D vector-based drafting systems to the new 3-D solid and surface modelers. While 2-D is still used for drawings of physical components, 3-D is now being employed for detailed engineering and architectural drawing. Even more sophisticated 4-D and 5-D modeling is again changing the face of the construction industry, delivering state-of-the-art buildings and creating value for both design and construction firms. The term now used is BIM, which has found a place in the vernacular of the contracting industry.



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BIM vastly optimizes design concepts. The generation of information through technology can be maintained throughout the life cycle of the building; and, on shared platforms, BIM can fully coordinate a number of separate project components, such as MEP clash coordination to overcome interoperability issues.

The industry is reliant on them, and therefore exposed to any of its potential shortcomings or vulnerabilities.

## WHERE IT COULD ALL GO WRONG

**What are the exposures inherent to BIM software? Fortunately, this is not a question that immediately conjures terrible headlines or stories of project failures. Litigation to date, even on a global basis, has been negligible. The risks are quite real, however. Many are common perils of the cyber world.**

- Design failure in the drawings generated from the CAD software
- Software-generated denial of service (denial of service arises from faulty software, a hacking attack or a launch of a virus)
- Disgruntled employee introducing a Trojan horse into the software system
- Hackers breaching a project-dedicated website and gaining access to the BIM system, whether the intent is disruption or allowing access to potential competitors
- Back-door code by which a hacker enters a system to release a virus
- Intellectual property rights (IPR) issues derived from a design company's use of open-source software (such as Revit) or others' use of the design company's proprietary products
- Business interruption as a result of hacking, virus or denial of service

## WHAT YOU CAN DO

Best business practices can reduce risks inherent in the employment of BIM.

### THE IT MANAGER'S ROLE

Does your firm employ an IT manager? An IT manager usually holds a senior role in the organization. He or she will have direct supervision over the BIM software and should play a key role in making sure security is in place and that contracts are updated each time the software is updated. An IT manager should also oversee internal clearance processes to ensure that the right people have access to the software. Many BIM exposures are related to unauthorized access to the BIM software. An IT manager should also be responsible for implementing internal standards in compliance with the National Building Information Modeling Standard (NBIMS).

### DISASTER RECOVERY PLAN

**What is your disaster recovery plan? This will become a critical part of system recovery should you be faced with a loss related to your BIM software. An up-to-date plan will provide estimates of how long it will take your organization to get up and running after a system shutdown.** A disaster recovery plan should be updated annually and managed by senior personnel. Turnover is high in the IT field. If the individual in charge of the plan leaves the firm, the responsibility must be passed along immediately.



# INSURANCE SOLUTIONS

There are three places to look for insurance coverage for BIM risks: General Liability, Professional Liability and Cyber and Technology products. Starting with General Liability, design company risk managers should be sure to consider the following.

1. Broaden the definition of *professional* in your Commercial General Liability insurance contract.
2. Redefine *professional services* language to include technology and software services in the insurance contract.
3. Review the *hold harmless* language in your construction contracts. Make sure the wording is sufficiently robust.

Professional Liability policies provide coverage for losses stemming from design failures (i.e., defects) that are the result of a negligent act, error or omission. Policies may provide limited technology coverage for minimal software failure but will provide third-party coverage only. If the proximate cause of loss is not design failure/defect, coverage may fall short. The gap can be filled by Cyber and Technology insurance products. Beazley, Zurich and AIG can provide some coverage extensions to Professional Liability policies for contractors and design consultants; other carriers offer this coverage on a stand-alone basis.

**In the insurance marketplace, technology-based risks are beginning to mature, but cyber exposures are still considered new.** Fewer carriers offer coverage for new risks with uncertain loss potential. Softening in the overall insurance underwriting sector, however, prompts carriers to expand into new business areas to create growth. If current conditions continue, we expect insurers will begin to free up capital for this class of business, which then creates additional competition in the marketplace. Now is an especially good time to consider coverage for BIM exposures. Working with an experienced risk management partner can help you with the risk-mapping process and with sorting through the available options.

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