

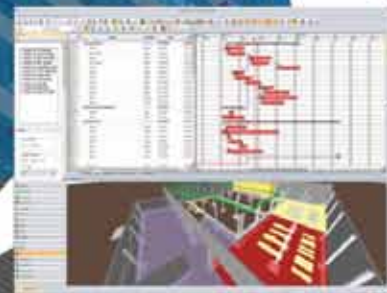
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Why would you not want this?

No BIM for You: The Case for Not Doing BIM



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The Unmistakable Benefits of BIM Enhanced With PIM

By Bob Batcheler and Allen Preger

IF YOUR FIRM HAS BEEN USING building information modeling (BIM) software for awhile, you've probably succeeded in the modeling part of BIM; that is, using BIM-based design to produce coordinated sets of drawings much more efficiently than you could using computer-aided design's (CAD) sheet-based approach. However, many architecture, engineering and construction (AEC) firms are still struggling to use BIM as a building information management solution. For example:

1. BIM software can revise and publish hundreds of perfectly coordinated drawings faster than ever but BIM itself offers no revision management or distribution tracking facility.
2. The model may contain room and space elements but the space program is more likely to be created and managed in a spreadsheet, rather than the model.
3. BIM happily accommodates building element properties but you may prefer to import that information from outside of the model where it may actually be easier to populate and update hundreds of different properties.
4. BIM has accelerated the production schedule for coordinated sets of design drawings but if design challenges cannot be quickly and easily communicated, tracked and resolved, these schedule gains cannot be fully realized.

These examples and others demonstrate the need to consider the use of project information management (PIM) software. Doing so allows that information, which is otherwise trapped in the model and readily-available only to BIM experts, to be used by a broader cross-section of project team members.

To truly understand the need to manage the "I" in BIM and connect related project information to the model, let's look at these use cases in more depth.

USE CASE 1: DOCUMENT CONTROL AND ISSUE MANAGEMENT

BIM can quickly revise and publish hundreds of perfectly coordinated drawings.

The problem: With no revision and issue management process, you quickly lose track of this steady stream of deliverables and are left to wonder who got what, when and how. With the absence of reliable record document management comes the risk that project team members may unknowingly be working with out-of-date information, reducing coordination and increasing field rework.

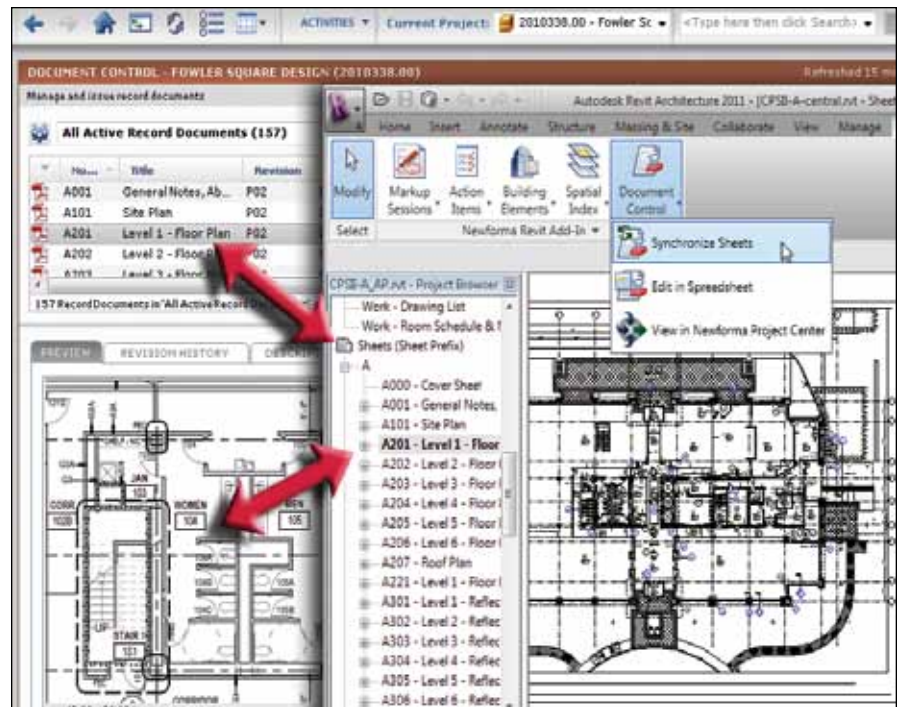
The solution: Many firms we have spoken to have developed spreadsheets and laborious manual processes to manage the tracking of record documents in an attempt to mitigate this risk. More efficient and effective is PIM software, which connects BIM to a document control system to manage

the quality and track the distribution of drawing revisions published from building models.

USE CASE 2: ROOM INFORMATION MANAGEMENT

The building model contains up-to-date room geometry information that is vital to the work of space programming staff.

The problem: Programming staff typically use spreadsheets, databases and room datasheets to track and document room requirements, while BIM technicians manage room placement and geometry in the model. Since the program and model evolve continuously over the course of a project, keeping them in sync is a constant challenge. An absence of coordination between the room program and the information in the model is a significant source of potential risk for firms, whether in architecture, engineering or construction.



PIM software images by HOK, Inc.

PIM software can connect the BIM to the project document control register used to review, issue and track the many revisions of record document deliverables generated from the model.

The solution: PIM software connects spaces with a project-wide spatial index. Such a connection enables modeling and building programming staff to work in parallel to dynamically coordinate room layouts in the model with the space information in Microsoft Excel.

USE CASE 3: BUILDING ELEMENT MANAGEMENT

Models may contain extensive information about building elements, from fixtures to building services equipment and beyond.

The problem: Managing building element properties within the model is cumbersome and requires dedicated staff trained in the use of BIM software to keep it current. Since the quality of this information cannot always be trusted, many firms ignore the non-graphical information in their models and manage information such as door, equipment and fixture schedules in disconnected spreadsheets.

The solution: PIM software manages building element information directly or in a spreadsheet. Ideally, the PIM software synchronizes with BIM to keep information in the models current and reliable. An added benefit of using PIM

software is that engineers and project managers who don't have the proficiency to access the model directly can use PIM search capabilities to quickly find, sort and filter building elements by any property.

USE CASE 4: COORDINATING BIM DESIGN

As already mentioned, a model-based approach significantly accelerates the production of fully coordinated sets of design drawings.

The problem: If design challenges cannot be quickly and easily communicated, tracked and resolved, productivity gains may be offset by delays associated with communicating and resolving design or site condition challenges.

The solution: PIM software allows action items, markups and requests for information to be linked with views or elements in the model, then shared with other stakeholders. By facilitating the quick communication and resolution of design and construction challenges, PIM software enables firms to achieve accelerated production schedules while still adhering to the familiar designer/reviewer backcheck workflow that is essential to project quality.

PIM SOFTWARE FOR REAL LIFE

Using knowledge gained from architecture, engineering and construction firms, PIM software has been developed to connect the "I" in BIM to processes vital to the success of a project, such as controlling documents, managing room information and tracking action items.

With the advent of electronic PIM, now it's easy and practical to connect BIM to other project deliverables and to share these connections across the entire project team, including external consultants and contractors. Increasingly, PIM software is used in conjunction with BIM to manage model-based design workflows, provide transparency and track accountability for more effective and profitable project delivery.

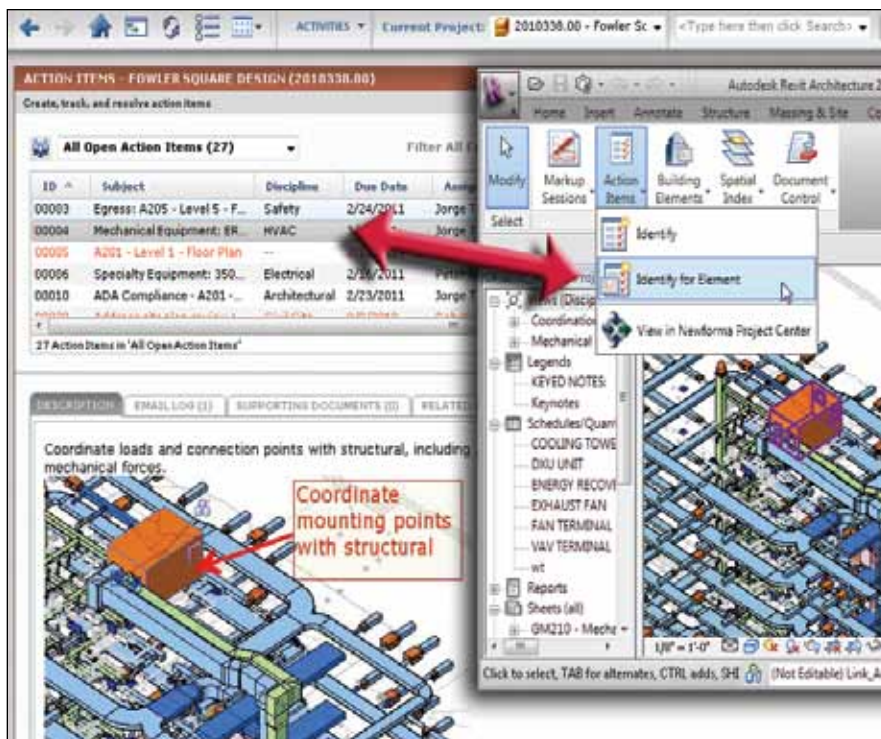
SUMMARY

By connecting the people and processes surrounding the BIM design process with the information behind the model, PIM software enables broader project team input to the building information management process while also allowing team members to repurpose information derived from a BIM to drive adjacent or downstream project processes.

Importantly, by standardizing your BIM-related work processes across teams and projects in your organization, and intrinsically binding these processes within your broader project information management strategy, your firm can maximize the cumulative benefits of BIM and PIM to enhance efficiency in project delivery, reduce risk and maximize client satisfaction. ■

Bob Batcheler is Newforma's Vice President of Industry Marketing. He works directly with AEC firms to capture business requirements as use cases for the development of the Newforma PIM solution. He can be reached at bbatcheler@newforma.com.

Allen Preger is Newforma's Chief Product Officer, charged with converting use cases into functional PIM software that supports model-based design processes and maximizes the results from using BIM.



PIM software can connect design and constructability challenges in the model to action items and markups managed.