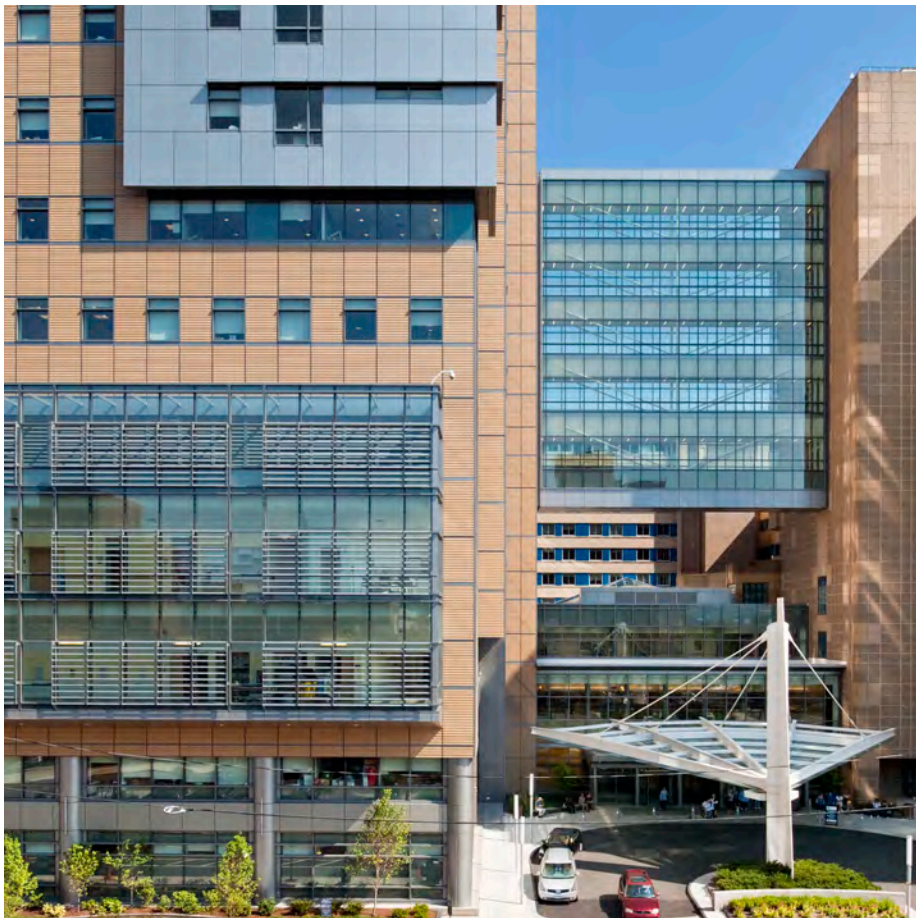
BIM: An Owner's Guide



Project delivery

Visualization

Collaboration

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A Building Information Model, or BIM, is the product of a digital tool in widespread use in the building design and construction industry.

For owners, BIM offers better visualization of early design concepts, improves the design process by increasing integration of information across all disciplines, and its final deliverable may assist owners with facilities management.

(top) Photo-realistic concept rendering used to convey project intent. A model was created solely for the image with very little pre-design completed.

(bottom) This axonometric plan shows a different perspective than a traditional floor plan. This view helps make the design accessible to end users who may not be comfortable reading plans and elevations. It was taken from a design model with minimal effort.

Project delivery

Project delivery is about leveraging the "I" in BIM to input, track, sort, analyze, output and otherwise manage pieces of information within the context of a building model. From site analysis and program to facilities management and life-cycle costs, BIM helps us to manage information that is important to the successful delivery of your project.

Visualization: working in three dimensions

As a tool, while BIM can't determine your needs, it can help you understand your options by giving us a range of levels of graphic detail to use when presenting you with design choices, as shown on the following page. Photo-realistic images still require significant effort, but a more basic plan (image at left) is relatively easy to produce and easier for many future building users to understand than traditional plans or elevations.

Integration: Enhanced collaboration

BIM offers powerful tools for project collaboration. Its dynamic platform lets us collect designs from all disciplines in one place and evaluate them at the same time for coordination purposes. Doing so in conjunction with online web conferencing allows us to share information and address concerns in real time, regardless of team members' physical location, offering significant value in terms of project efficiency and cost.

Q. How do I manage a BIM process?

A. Manage it the same as any other process. While understanding a tool is always useful, you won't need to use BIM directly since you can use no-cost viewers to experience the model. To manage a BIM-enabled team thoroughly discuss the design approach early on, customize process options, then adhere to a work plan. If you want to track data such as square footage and quantities, BIM can do that. Just let us know.

Q. Can the CM build from the design model?

A. It depends on how much you want to invest in the model. A design model doesn't have the detail required for a construction model. While it's possible to invest in a model with the level of detail that allows a contractor to build from directly, doing so for a unique building design is typically not worth the investment in time and labor that would be required.

Q. How does BIM support a sustainable practice?

A. Designers make a project sustainable. Many BIM packages include or tie into energy modeling software for performance analysis, enhancing potential energy efficiency. In addition, since BIM supports virtual collaboration by allowing a geographically scattered team to experience and discuss a live model in real time, and can reduce the need for travel. This lessens environmental impact and potentially lowers project cost.

Q. Should my CM also use BIM?

A. It can make a process go more smoothly. Many Construction Managers (CM) and contractors already use BIM regularly for estimating, shop drawings, reviewing approaches to construction, and documenting built conditions. While it is not essential, using BIM can make project team coordination more effective.

Q. Is BIM faster?

A. It can be. Incorporating the detail required to build a project requires approximately the same amount of time with BIM as with other processes. That said, decision-making is the most time-consuming part of a project: BIM's visualization capabilities help us give you the tools you and your colleagues need to make informed decisions.

Q. Does BIM cost more?

A. Not as a rule. BIM is the industry standard, and the baseline for designers. There is no added cost for us to use BIM. Cost control in the design process is best achieved by having a clearly defined design and approval workplan. To customize your process, work with your team at the start of the project to consider your options.

Imagery and BIM

Concept Image (top) **$$$** 🕘🕘🕘

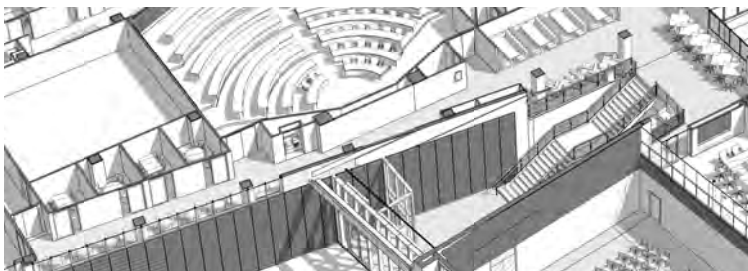
This photo-realistic image was created during design development to convey a sense of how the building will look when it is completed and to establish the presence of the project on the campus. The image shows building design to date with accurate materials, lighting intention, and site improvements. The rendering was requested by the client who wanted a strong graphic to use for project-related development, marketing, and fundraising efforts.

Presentation Image (middle) **$$** 🕘🕘

This image was used for a board presentation, to convey the feeling of the spaces being proposed. This was taken from a model at the schematic level of development.

Working Image (bottom) **$** 🕘

This is a typical image, taken directly from the model, that can be used to explain and discuss concepts among team members, including the owner and CM.



2 Seaport Lane, Boston, MA 02210 | 617.423.1700

1437 North First Street, Suite 201, Phoenix, AZ 85004 | 602.430.3223

Need more information? Email us at info@shepleybulfinch.com