

Building Information Modeling

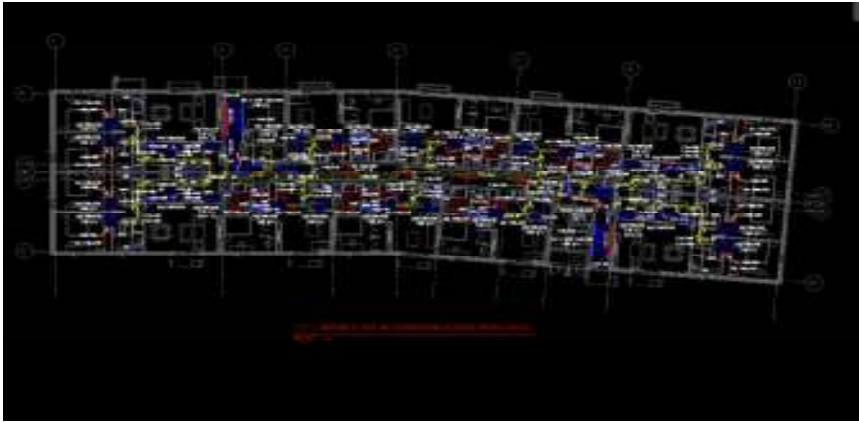
BIM is described as the process of generating and managing building data during its life cycle. Typically it uses three-dimensional, real-time, dynamic building modeling software (REVIT) to increase productivity in building design and construction.



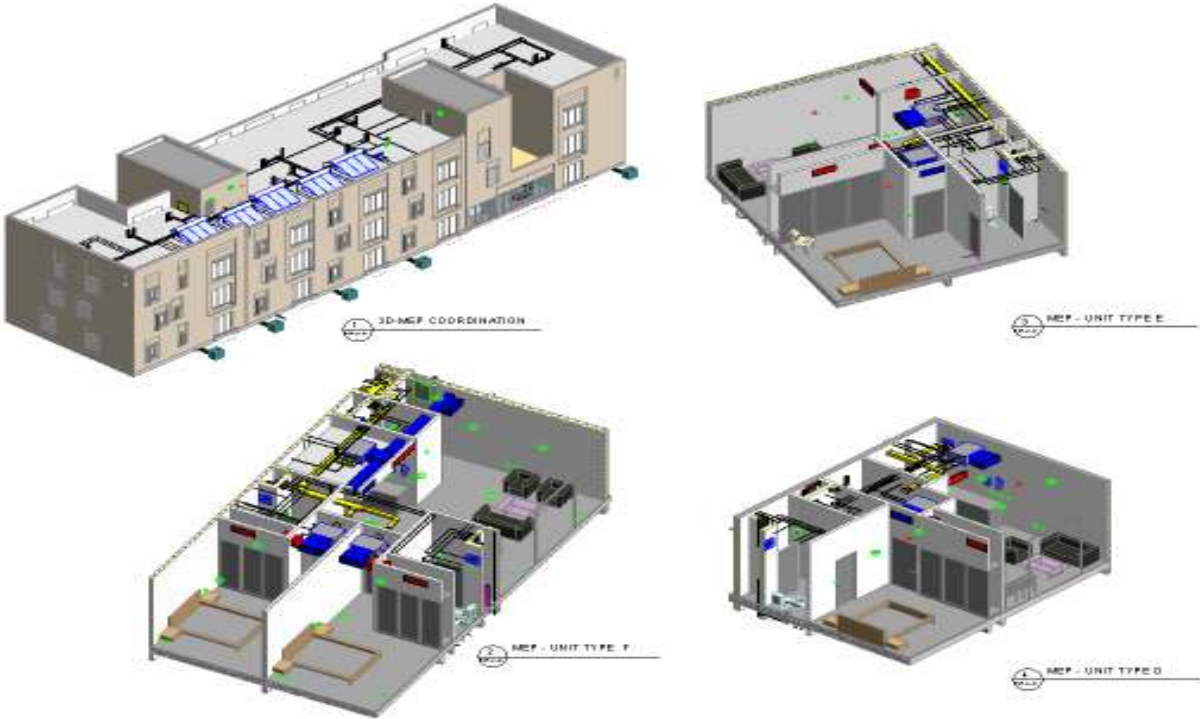
The process produces the **Building Information Model (BIM)**, which encompasses building geometry, spatial relationships, geographic information, and quantities and properties of components. These different views are automatically consistent – in the sense that the objects are all of a consistent size, location, specification – since each object instance is defined only once, just as in reality. Drawing consistency eliminates many errors.

BIM needs a virtual building model in 3D as a basis

From working the traditional way –using 2D Software as a digital drawing board ...



... to creating a virtual building model with “intelligent” objects in 3D – including quantities and costs

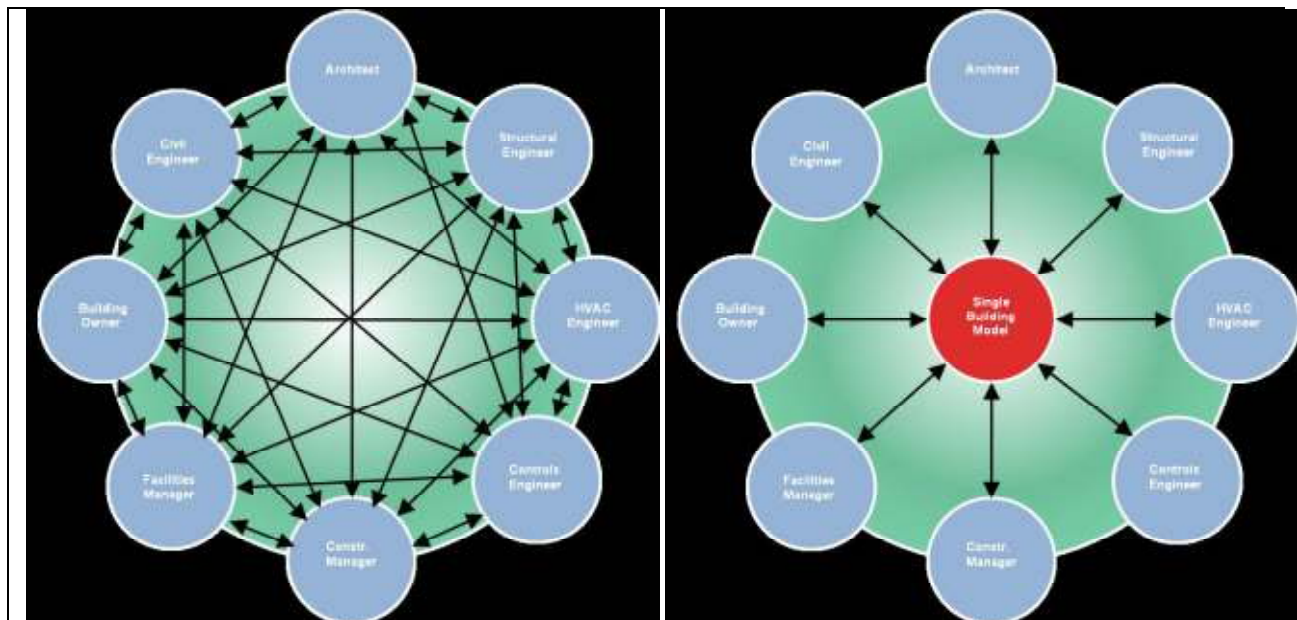


Building process calls for better coordination

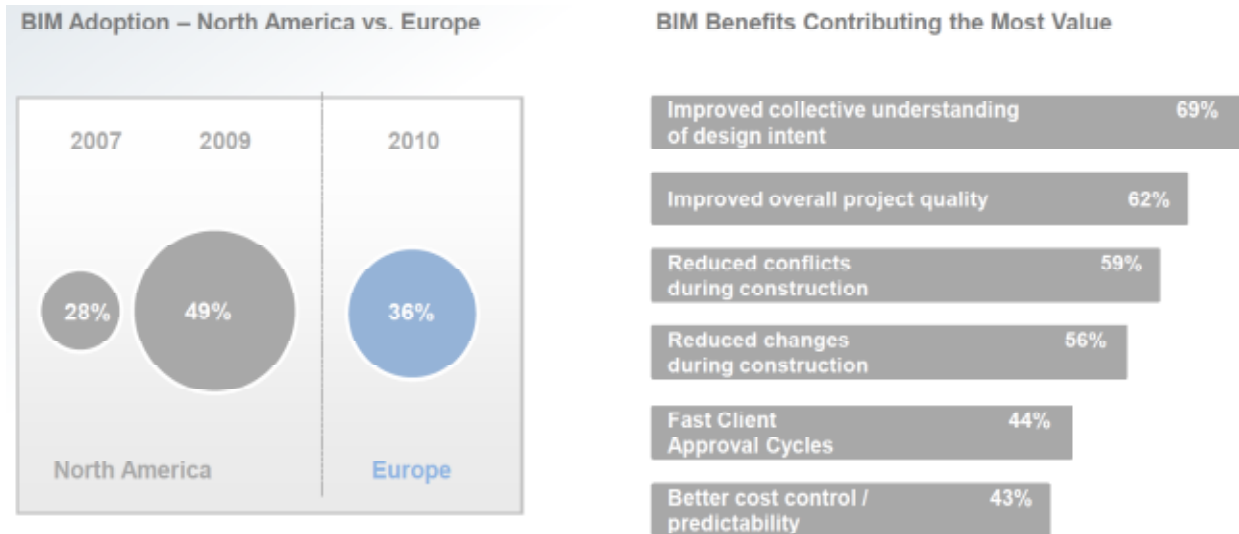
Pieces can carry attributes for selecting and ordering them automatically, providing cost estimates and well as material tracking and ordering. It eliminates many of the uncertainties found during the construction phase since they can be found during the design phase of the project and fixed so they do not occur during the actual construction phase.

Also, any changes during construction will be automatically updated to BIM and those changes will be made in the model. Modern BIM design tools go further. They define objects parametrically. That is, the objects are defined as parameters and relations to other objects, so that if a related object changes, this one will also.

The use of BIM goes beyond the design phase of the project and takes an important role during the construction phase of a project as well as the post construction phases and facility management. The entire purpose of BIM was to make the construction process more efficient and eliminate as many uncertainties as possible before starting the construction process.



Adoption of BIM is increasing ,as benefits by time ,are more and more being substantiated:



Source: Internet survey of industry professionals, McGraw-Hill Construction, 2010