PRODESIGN
SUSTAINABILITY & MEP ENGINEERS

Building Design Factsheet

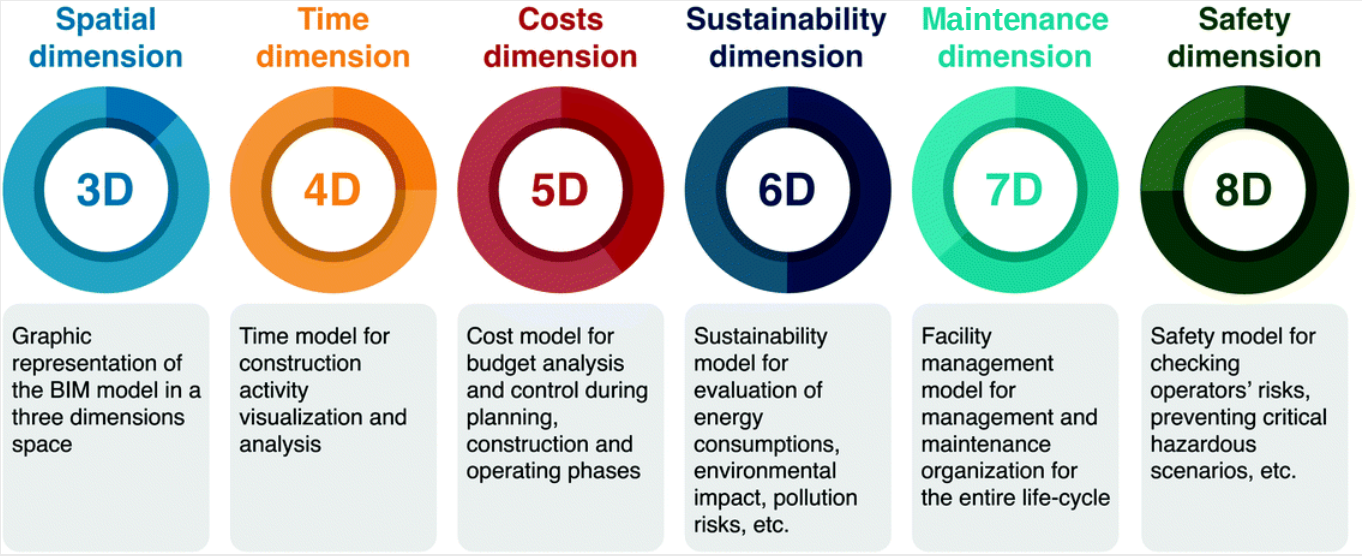
October 2020
Issue 12

Construction 4.0 Series

[3] Understanding the Dimensions of BIM

BIM is a very broad process for the creation and management of digital information about the asset that is being built. One common concept of BIM is its dimensions. BIM dimensions refer to which type of data are linked to the model. Each dimension and the data that is added to it gives a broader understanding of the project, like its cost, how it will be delivered, what maintenance is required and so on. The information that is created becomes more and more detailed as a project progresses and by adding additional dimensions of data, a fuller understanding of a construction project is achieved. This In this issue, we will look at these different dimensions of BIM process and see how they result in a greater level of understanding of a construction project. BIM technology has evolved from basic dimensions like 3D & 4D to more sophisticated levels like 7D and 8D. Adding extra information to a model makes for more timely decisions and, ultimately, better buildings.

The illustration below shows the different dimensions of BIM from 3D to 8D and gives a simple description of what aspect of a project each dimension covers.



Springer Conference Paper, 2019

At Prodesign, we have fully incorporated BIM up to dimension 3D into our internal workflows and in all our projects. This includes the implementation of visual programming, automation of tasks and the adoption of visualisation platforms such as Virtual Reality or a BIM viewer.
Our R&D team is extensively working on expanding to the other BIM dimensions. BIM 5D is next on the agenda, where we are exploring how to generate accurate cost estimates/costing directly from a BIM model.

BIM 3D includes:
- **Renderings, walkthroughs, laser scanning**
- **BIM object creation, clash detection, model checker**
- **Detailed design including structural**
- **Sustainable design (isolation, sun protection, daylight requirements**

Pro-Design Engineering Consultants Ltd
First Floor, Building No.2
Valentina Industrial Estate, Phoenix
Tel: (230) 660 4545

www.prodesign.mu

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We can help you.