

## Construction 4.0 Series

### [2] Benefits of BIM for the Construction Industry

Over the past few years, BIM has been gaining more and more popularity in the AEC industry worldwide. While many have understood what BIM is and how they can benefit from it, there are also many misconceptions around the topic. Building Information Modelling (BIM) is the process of creation of an intelligent 3D model known as a Building Information Model which contains every detail and data on each physical component of the building. BIM also enables coordination, management, and simulation during the whole project lifecycle, from planning, design, construction, operations, and maintenance.

BIM offers many possibilities when it comes to exploring and analysing design options and the creation of virtual models to help stakeholders visualise and understand a building before it is built, allowing design and construction teams to work more efficiently. These endless possibilities have resulted in BIM becoming mandatory in many countries across the globe.

In addition to better collaboration, clash detection and pre-construction visualisation, let's look at some of the main benefits of BIM at construction stages:

- **Better understanding of the future building**

Unlike paper drawings, BIM models allow for sharing, collaborating and versioning. Cloud-based platforms allow collaboration and coordination within the whole project team. Models can be viewed on site and virtual meetings can be conducted with BIM tools.

- **More accurate cost estimation**

5D BIM allows for the integration of construction cost estimation at earlier stages of a project. With BIM, many time-consuming tasks can be automated, giving resources more time to focus on higher value aspects of the project.

- **Increased productivity with prefabrication**

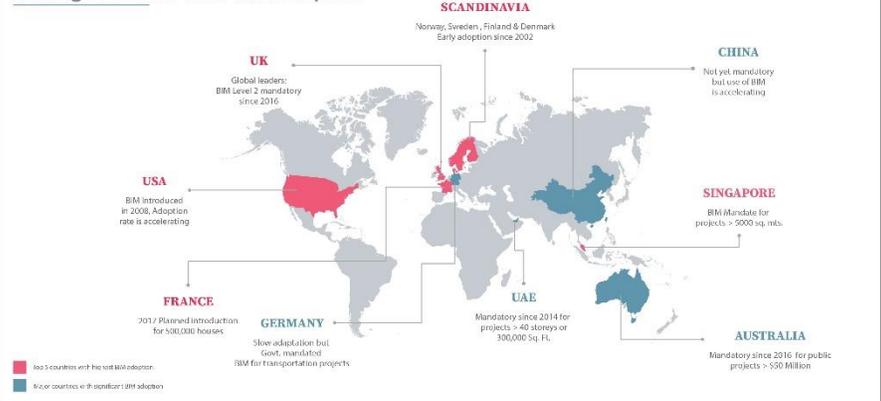
Information from the BIM model can be used for prefabrication manufacturing purposes. With off-site manufacturing in a controlled environment, construction waste, labour and material costs and inefficiency all decrease considerably.

- **More seamless building handover and Facilities Management**

The use of coordinated models, virtual simulations, and better decision-making lead to an improved building quality. Design aesthetics can be easily determined, and construction becomes more accurate. The accurate information in the model will drive the operations and maintenance of the building and provides digital records to facilitate future changes and renovations.

At Prodesign, we have realized the benefits of BIM for ourselves, our clients and the African construction industry. If you are interested in BIM and Virtual Reality for construction, do get in touch with us for a presentation and live demo.

Leading Countries With BIM Adoption



United BIM, 2020