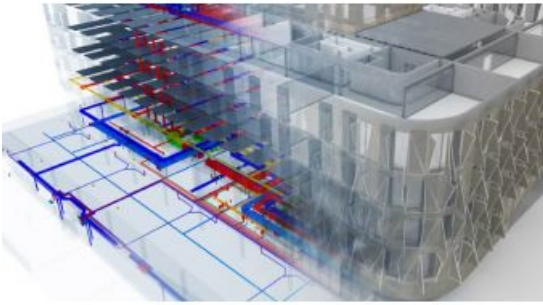


The Need for BIM Standards in Digital Construction



How can standards contribute to producing optimum processes and deliverables for building projects through building information modelling (BIM)? This article explains the benefits in terms of reduced delivery time, improved cooperation and lower costs.

The implementation of building information modelling (BIM) in construction projects involves the digital representation of the physical and functional characteristics of the components that constitute a construction project. The resulting BIM digital model constitutes a reliable basis for decision-making throughout the life of the project and features not only great benefits associated with reduced delivery time, but also improved cooperation between sectors and lower construction cost of projects. As this article explains, standards can

contribute to producing optimum cooperative processes and deliverables for building projects through BIM.

The use of BIM is in rapid growth in the largest construction markets and many countries worldwide have already institutionalized through mandatory implementation in all public works. Although the USA was the first country to adopt BIM, the highest success rates of BIM are recorded in countries where BIM is required, such as the United Kingdom, based on specific standards and procedures.

A second factor that prevents BIM from spreading is the confusion caused by the wide range of BIM software and the interoperability they have with each other, that is, the transfer of data from one software to another.

Users must be able to extract models from one software to another regardless of which program they use. The [IFC standard](#) from Building Smart International has been created to solve this issue and is subject to continuous improvement.

National BIM standards

Standards exist in many sectors of our lives and improve to a great extent the quality of the various items we use every day, such as standards already applied to food and electricity, but also to products of the construction itself, such as windows, materials, etc. Overall, the manufacturing industry and sector collaboration is no exception, and standards can contribute to producing optimum cooperative processes and deliverables for building projects through the BIM.

In the United Kingdom, national BIM standards have been developed due to the relevant legislation for adopting BIM. This legislation refers in detail to all the BIM stages and contains a large number of documents which define in a clear way procedures, roles, deliverables, levels, and so on. Other countries such as Finland, Norway and Singapore also have national BIM standards and most countries worldwide plan to follow suit.

The need for global BIM standards

In countries where the BIM has not been institutionalized and there is no such provision, several private and public bodies are developing initiatives with their own standards for the use of BIM. This, of course, makes it difficult to adopt BIM in the industry because each engineer, architect and contractor needs to learn many unique BIM standards for each project involved.

In addition, globalization has affected the construction industry and there has been a significant increase in international projects and collaborations. The fact that each country has its own rules and regulations impedes an agreement on European or global BIM standards. The best known BIM standards currently implemented are PAS 1192-2, COBie, NBS National BIM Object Standard and IFC.

In an effort to form a common international standard base for the implementation of BIM, in December 2018, the new [ISO 19650](#) on the processes of digital manufacturing via BIM was published. ISO 19650 is based on the proven English standard BS 1192 and promises to bridge the gap between different standards. Its implementation and, to what extent, it will affect the implementation of BIM at international level is something that we all still have to see.

BIM is the future of the construction industry, and the sooner the industry adopts the BIM and all related standards, the sooner it will enjoy the benefits of BIM in relation to the cost and timing of the project delivery. The creation and adoption of BIM

specifications and protocols can lead to a consistent and effective method of data exchange with great benefits for construction projects.

<https://www.gim-international.com/content/blog/the-need-for-bim-standards-in-digital-construction>
