

BIM *Building Information Modeling*

DETAILED INFORMATION 01

INTRODUCTION

The European Directive 2014/24/EU on Public Procurement expresses clearly the indication to introduce Building Information Modeling within the contract procedures of the Member States.

In art. 22 c.4, in the English version of the Directive, in fact we find:

"For public works contracts and design contests, Member States may require the use of specific electronic tools, such as of building information electronic modeling tools or similar".

WHAT DOES BIM MEAN?

BIM is an acronym that has various meanings, including:

- Building Information Modeling.
- Building Information Model.
- Building Information Management.

These are three different meanings that are connected. There is much confusion about these three definitions and their meanings. Frequently it is possible to come across, both on the Internet and in publications, different incorrect or reversed definitions. It is important to clarify the various meanings precisely in order to avoid confusion and bad decisions.

B stands for Building

We begin with the word "building", which is almost always translated as a noun meaning "building", forgetting that it is also a verb that means "to build". The use of the noun is related to the birth of the term BIM with reference to the first software for architectural design (see Graphisoft) in which the building was designed with virtual equivalents of real parts of the building (walls, windows, doors, etc.).

Over time the term Building has changed meaning to include all sectors of construction, not only as types (buildings, roads, railways, bridges, tunnels, etc.), but also as stages (planning, design, construction and maintenance).

We can therefore conclude that the term building currently refers to the verb "to build".

I stands for Information

This is the easiest term to explain and it is also the heart of BIM.

BIM is information management, which is a set of organized data: meaningful, usable and exchangeable.

BIM is revolutionary because it changes the way you manage and exchange information regarding the entire life of a project and each of its parts.

The information is not limited to the visual representation of the project parts, referring also to the physical and logical characteristics of their real-life counterparts, and including non-visible information.

This enables customers, designers, engineers, builders, manufacturers and owners to understand an entire project before its construction, refine the proposal to avoid errors and generate efficiency.

M stands for Modeling (but also Model and Management)

This is the most important letter since it changes the meaning of the term BIM.

- Modeling is a process. The definition is not simple, but in general a process is a network of changes, activities or actions, linked together to produce an object, structure, building or construction.
- A Model is a representation, reproduction or simplified version of an object, structure, building or construction.
- Management: organization and control of a process.

Building Information Modeling is the BIM mentioned in the European directive, it is the BIM which is requested most often at the international level. Building Information Modeling is a process for the creation and use of building information to plan, design, build and operate a building, infrastructure or something else. BIM allows all interested parties to access the same information at the same time through the interoperability between different technological platforms.

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It is clear that Building Information Modeling (BIM) being a process is not software, nor a technology, nor a data format and it is not even a 3D visualization.

Conclusion

Having clarified the meaning of Building Information Modeling one can understand the importance that the adoption of this process has in the construction industry and the reason for which it will increasingly be in demand.

But to what do the other two meanings of BIM correspond?

The Building Information Model is a model of information about an object, structure, building or construction. This meaning of BIM indicates an organized set of data, often in file format, which can be exchanged and shared to support the decision-making process on the construction of a building, infrastructure or something else.

Building Information Management is instead the organization and control of the process using the model information to share information about the entire life cycle of a building, infrastructure or something else. Building Information Management is very similar to Building Information Modeling.

.... to be continued...