

THE INFORMATIZATION DEVELOPMENT TREND OF GLOBAL CONSTRUCTION INDUSTRY

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In order to better implement and improve the informatization of construction enterprises, the construction industry must also keep pace with the development of information technology. Enterprise informatization is a process in which enterprises use modern information technology to continuously improve the efficiency and level of production, operation, management, and decision-making through in-depth development and extensive use of information resources, thereby improving the economic efficiency and competitiveness of enterprises.

Building Information Modeling (BIM)

BIM is a multidimensional information model based on three-dimensional geometric model. BIM technology is the most important new technology for industry informatization following Computer Aided Design (CAD) technology. The application values of BIM technology are providing a more intuitive display, facilitating the communication between the owner, the designer and the construction party, significantly improving the delivery of the project, and promoting the development of information technology in the construction industry.

Mobile Computing

Mobile computing is a new technology that has emerged with the development of technologies such as mobile communications, the Internet, databases, and distributed computing. It enables users to use tablet computers, smart phones, and other devices to implement an information entry, browsing, and query functions in a wireless environment. It helps to greatly increase the efficiency of information transmission and ensure that information is updated in a timely manner. This has changed the inefficient working methods that used to be recorded in the field with a notebook and returned to the office. Computer technology can also be applied to generate a virtual environment in front of the user's eyes to make people feel like there is real life, so that relevant personnel can experience the designed facilities in the virtual environment and make decisions or changes before the construction begins.

Collaborative Environment

Collaborative environment mainly refers to systems that are used to work collaboratively between networks, supporting organizations and professionals. Useful, accurate, and timely information can be provided to any customer at any time and any place for on-site management, facilitating the collection of data and querying of data in the field. By facilitating the effective use of information resources, the efficiency of collaborative work among participants can be increased while reducing the costs and strengthening the control capability of general contractors.

Cloud computing

Cloud computing is the provision of on-demand, easily scalable, and often virtualized resources over the Internet. It is able to access globally dispersed databases. Cloud computing is a multifunctional information technology paradigm that develops high-end applications (such as simulations) on the Internet, which is able to support a unified Internet-based schedule management platform; enable application units to rent software on a project basis; support access to the same information through third-party platforms; and assist

project teams. For example, in the construction industry, the project cost needs big data analysis platform - the index cloud operates cloud computing technology, which can help construction companies better implement the development of informatization. With that, construction companies are able to build their own databases and promote the sharing of information in the construction industry. Information technology application has been widely applied in project management, design, construction, engineering consulting services, etc.

With the rapid development of information technology, information technology in the construction industry is also rapidly developing. Stakeholders of construction industry shall always keep themselves abreast of the development of information technology in construction companies to avoid being phased out. It is hoped that this brief analysis of the development trend of the global construction industry informatization will be an important reference value for construction enterprises especially in Malaysia to increase the awareness and competitiveness of local companies while dealing with increased competition due to the liberalisation of services sector.

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