Список использованных источников

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BUILDING INFORMATION MODELING (BIM)
BENEFITS PER MARKETING

Building Information Modelling (BIM) is currently considered as a collaborative process in which all parties involved in a project use an intelligent 3D model-based design application that provides architecture, engineering, and construction (AEC) professionals the insight and tools they need to more efficiently plan, design, construct, and manage buildings and properties. It also can include shared information on scheduling (4D), cost (5D), sustainability (6D) and operations and maintenance (7D) to ensure information is shared accurately and consistently throughout total assets’ lifecycles [1]. BIM software benefits architects by enabling them to manage design phases, let property owners and investors use it to keep track of operations and allow engineers to use it for modelling systems. BIM is an exhaustive research topic in the field of construction informatics or computing in building engineering and mainly applied today to the new construction industry. The future of BIM is determined by the ongoing research and software development that has been summarized in several studies [2].

Some primary benefits of BIM, perceived by project stakeholders, include enhanced efficiency, reduced time and construction costs, improved quality and workflows, ease of information exchange across the entire value chain, clarity and accountability in decision-making, opportunities to boost collaboration among project stakeholders, better visualization, improved project monitoring and sustainability, support the construction procurement process, integration of building systems, conflict resolution and improved end-user/customer satisfaction [3].

BIM should also eventually help citizens to make better use of the transport, water, communications and energy infrastructure already in place and help to boost value from the investment made in sustaining those assets. BIM technology is a promising way of exploring how
BIM will beneficially support sustainable real estate development, facilities management and housing renovation, refurbishment and maintenance of the built environment [4]. A fully digitized built environment could have a greater impact, optimizing all services based on the built environment.

BIM will significantly impact the marketing process and collaterals [5]. With proper preparation, marketers can help their companies anticipate and prepare for these changes, address «message» strategically, potentially learn to operate in the BIM environment to the extent that it is helpful for marketing, and produce the communications required. As communications professionals and “big picture” thinkers, marketers can also take an active role in the strategic planning and operational implementation of BIM in their firms: they can educate technical and management staff, coordinate with consultants and collaborators, and help bridge the gap between the capabilities of BIM and the “real world” of communication, design, and project management.

Building Information Modeling software solutions are in high demand in the US and Western Europe, helping to enhance productivity and collaboration across the entire project lifecycle, and reducing waste and cost. In the current economic climate, technology solutions can drive business competitiveness and new levels of digital business innovation.

BIM adoption in Eastern countries has been slow, despite its many advantages. Implementation of BIM-technologies in the design and construction will start in 

Russia and Kazakhstan are also busy assimilating BIM technologies.

A national roadmap was developed for the BIM adoption in the Former Yugoslav Republic of Macedonia.

BIM implementations are generally of a complex nature a range of organizational and technological barriers for BIM implementation have been analyzed in some researches [6]. BIM implementation barriers range from lack of BIM framework, top management support, low awareness of BIM benefits, fears of too low success low or a big failure, high initial investment costs [7], staff resistance to change, and cultural misfits, to creating new processes for BIM and interoperability issues [8].

Although the roots of BIM can be traced back to the parametric modelling research conducted in USA and Europe in the late 1970s and early 1980s, the AEC industry practically started to implement it in projects only from the mid-2000s [9]. EU countries began widely implement BIM technology from 2014. The Directive of European Parliament from January 2014 [10], encourage adoption of BIM and electronic tools in public works contracts in European countries. Creation of the EU BIM Task Group in 2016 was a particularly exciting moment for collaboration. The group consists of public sector experts from infrastructure, public estate owners, public clients and policymakers from 21 nations. Their primary function was to develop a handbook containing guidance on universal principles split across four themes including procurement measures, technical considerations, cultural and skills development, and the benefits case for policymakers and public clients. The Handbook for the Introduction of Building Information Modelling by the European Public Sector was released in 2017.

According to experts, the design, construction and operation of facilities using BIM technology are more efficient. The expected annual savings from the use of BIM-technologies at the design and construction stage is more than 20%.

Conclusions

The BIM technology and tools are developing rapidly (based on basic BIM methodology), but their effective and fast use in the marketing and another practice is constrained by existing contractual arrangements and traditional organization in the projects. Facility managers, construction and energy experts, and marketing consultants typically resist the changes that require them to deploy new concepts and technologies, such as BIM. Therefore, in addition to the legal instruments, it is necessary to raise stakeholders’ awareness about the benefits of BIM
technologies. Training and education on how to implement these technologies for marketing and other purposes are necessary to collaboratively organize the project and achieve optimal results.

At the government level, BIM adoption requires a long-term commitment and innovative financing to get the technology into the hands of stakeholders and marketing specialists who need it. Adaptation of legal and organizational frameworks is necessary to standardize the implementation of BIM tools. The implementation process for marketing must be based on reliable information, effective procedures and project teamwork relied on decision-making and BIM methodology.

References