INTISARI

Building Information Modeling (BIM) merupakan salah satu cara yang dapat digunakan untuk meningkatkan efektivitas suatu proyek, namun demikian di Indonesia implementasi BIM masih relatif rendah. Rendahnya tingkat implementasi BIM didasari oleh banyaknya faktor hambatan. Penelitian ini bertujuan untuk mengetahui faktor penghambat yang mempengaruhi implementasi BIM pada proyek konstruksi di Indonesia, serta solusi yang dapat diambil untuk menanggulangi faktor penghambat yang paling berpengaruh.

Penelitian dilakukan dengan metode analisis kuantitatif dengan survei kuesioner pertanyaan tertutup dan kualitatif dengan wawancara menggunakan kuesioner pertanyaan terbuka. Metode analisis yang digunakan pada kuesioner utama adalah *Analytical Hierarchy Process* (AHP). Responden yang dituju adalah *stakeholder* yang memahami dan pernah mengaplikasikan BIM pada proyek. Data kuesioner dianalisis dengan tujuan memberikan peringkat faktor hambatan yang paling berpengaruh terhadap implementasi BIM di proyek konstruksi. Selanjutnya dilakukan analisis kuesioner terbuka. Hasil data kuesioner terbuka dianalisis untuk mengetahui solusi yang dapat diambil guna mengatasi permasalahan implementasi BIM di proyek konstruksi.

Hasil dari penelitian ini didapatkan bahwa menurut responden faktor hambatan yang paling berpengaruh pada implementasi BIM di Indonesia berturut-turut adalah tingginya harga *software* dan *hardware*, kurangnya pengetahuan dan pemahaman tentang BIM, kesulitan perubahan atau transisi budaya kerja, ketidak jelasan biaya investasi dan *profit* BIM, serta kurangnya kesadaran akan manfaat BIM. Dari beberapa permasalahan tersebut dapat ditarik kesimpulan bahwa akar permasalahan yang menghambat implementasi BIM di Indonesia disebabkan karena kurangnya pengetahuan tentang manfaat dan kegunaan BIM. Permasalahan ini dapat diatasi dengan cara sosialisasi tentang BIM, diiringi dengan pelatihan dan sertifikasi BIM. Pemerintah juga harus mendorong dan memfasilitasi implementasi BIM pada proyek konstruksi di Indonesia.

Kata kunci: *Building Information Modeling*, *Analytical Hierarchy Process*, Implementasi, Proyek Konstruksi, Hambatan

ABSTRACT

Building Information Modeling (BIM) is one of the systems that can be used to improve the effectiveness of a construction project. However, BIM implementation level in Indonesia was still considered low. The low level of BIM implementation was caused by many obstacles. This study aimed to determine the inhibiting factors that influence the implementation of BIM in many construction projects in Indonesia, as well as the solutions that could be taken to overcome the most influential inhibiting factors.

The research was conducted by quantitative analysis methods with closed questionnaire surveys and qualitative with interviews using open questionnaires. The analysis method used in the main questionnaire was the Analytical Hierarchy Process (AHP). The intended respondents were stakeholders who understand and have already applied BIM to their projects. The questionnaire data was analyzed with the aim to rate the most influential obstacle factors of BIM implementation in construction projects. Furthermore, the open questionnaire analysis was carried out. The results of the open questionnaire data were analyzed to find the solutions that could be taken to overcome BIM implementation problems in construction projects.

The results of this study found that according to respondents, the most influential obstacles of BIM implementation in Indonesia were the high price of software and hardware, lack of knowledge and understanding of BIM, difficulty to change or transitioning work culture, unclear investment costs and profits of BIM, as well as a lack of awareness of the benefits of BIM. From some of these problems, it can be concluded that the root of the problem that hinders the implementation of BIM in Indonesia is due to lack of knowledge about the benefits and uses of BIM. This problem could be solved by socialization about BIM, accompanied with BIM training and certification. The government should also encourage and facilitate the BIM implementation on construction projects in Indonesia.

Keywords: Building Information Modeling, Analytical Hierarchy Process, Implementation, Construction Project, Inhibitor