

## ABSTRAK

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### **IMPLEMENTASI BIM DIMENSI 6 (KEBERLANJUTAN) DALAM SIKLUS PROSES PENGADAAN BARANG & JASA**

Tesis, Fakultas Sains dan Teknologi (2022).

(xi + 129 halaman; 11 gambar; 53 tabel; 43 lampiran)

Perkembangan revolusi industri dalam pemenuhan kebutuhan barang dan jasa dituntut semakin efisien dalam kegiatan produksi, sehingga kegiatan pengadaan dapat berkelanjutan dalam siklus yang berlangsung. Masalah yang ditemui dalam siklus kegiatan pengadaan yaitu faktor keterlambatan dan dampak yang terjadi akibat kegagalan tersebut. Tujuan dari penerapan konsep BIM dalam kegiatan pengadaan yaitu menciptakan permodelan informasi efektif dalam kegiatan yang berlangsung dan diharapkan setiap pihak yang terlibat mampu memitigasi apabila adanya perubahan dalam siklus pengadaan barang dan jasa dengan mengetahui peranya masing-masing. Pada penelitian ini dicari dahulu permasalahan yang memiliki dampak tertinggi dengan menggunakan metode *fault tree analysis* dan pengolahan data statistik dari kuesioner praktisi pengadaan barang dan jasa. Hasil penelitian didapatkan tiga faktor utama penyebab kegagalan dalam siklus pengadaan yaitu faktor eksternal (pihak penyedia), faktor internal (tim pengadaan), dan dokumentasi kegiatan. Peneliti memberikan saran yang bersumber dari literatur jurnal yang relevan serta diperiksa kembali oleh pakar ahli dibidang BIM, sehingga hasil akhir dari penelitian ini perlu dilakukan kajian penerapan BIM dalam siklus kegiatan pengadaan barang dan jasa. Kesimpulan penulis dalam penelitian BIM dimensi ke 6 pada siklus pengadaan, memberikan paradigma penerapan teknologi khususnya internet (*Internet Of Things*) memberikan manfaat kegiatan berkelanjutan dan efisien.

Kata Kunci: Metode BIM *Procurement*, Pengadaan Barang dan Jasa, Sistem Informasi dan management Proyek, Rantai Pasok Pengadaan Barang dan Jasa

Referensi : 24 (2021 – 2007)

## ABSTRACT

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### **IMPLEMENTATION OF BIM DIMENSION 6 (SUSTAINABILITY) IN THE CYCLE OF THE PROCUREMENT OF GOODS & SERVICES**

Thesis, Faculty of Science and Technology (2022).

(xi + 129 pages, 11 figures, 53 tables, 43 appendices)

The development of the industrial revolution in meeting the needs of goods and services is demanded to be more efficient in production activities, so that procurement activities can be sustainable in the ongoing cycle. The problem encountered in the procurement activity cycle is the delay factor and the impact that occurs due to the failure. The purpose of implementing the BIM concept in procurement activities is to create an effective information model for ongoing activities and it is hoped that each party involved will be able to mitigate any changes in the goods and services procurement cycle by knowing their respective roles. In this study, the problem that has the highest impact is sought first by using the fault tree analysis method and statistical data processing from the questionnaire of practitioners of the procurement of goods and services. The results showed that there were three main factors causing failure in the procurement cycle, namely external factors (providers), internal factors (procurement team), and activity documentation. Researchers provide suggestions that are sourced from relevant journal literature and re-examined by experts in the field of BIM, so that the final result of this research needs to be a study of the application of BIM in the cycle of procurement of goods and services. The author's conclusion in the 6th dimension of BIM research in the procurement cycle, provides a paradigm for the application of technology, especially the Internet (Internet Of Things) that provides benefits for sustainable and efficient activities.

Keywords: BIM Procurement Method, Procurement of Goods and Services, Information Systems and Project Management, Supply Chain for Procurement of Goods and Service.

Reference: 24 (2021 – 2007)