Sistem Business Intelligence Untuk Sektor Akomodasi di Indonesia: Model Downstream Supply Chain, Faktor Penghambat, Arsitektur, dan Prototipe = Business Intelligence System for the Accommodation Sector in Indonesia: Downstream Supply Chain Model, Barrier Factors, Architecture, and Prototype

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Abstrak

Salah satu tantangan yang dihadapi industri akomodasi di Indonesia adalah sulitnya melakukan pengambilan keputusan berdasarkan data dan informasi yang dapat diandalkan. Saat ini, Indonesia belum memiliki data usaha pariwisata yang komprehensif dan belum ada pusat informasi kepariwisataan berskala nasional yang dapat digunakan oleh para pemangku kepentingan. Untuk memperoleh data, mayoritas pengelola akomodasi masih melakukan praktik information sharing secara manual dan belum menggunakan sistem terintegrasi. Penelitian ini bertujuan untuk mengembangkan arsitektur dan prototipe (front-end) sistem business intelligence (BI) berbasis information sharing untuk mendukung proses revenue management di industri akomodasi di Indonesia. Pendekatan penelitian yang digunakan adalah Design Science Research yang menghasilkan solusi sesuai kebutuhan pemangku kepentingan di sektor akomodasi. Kajian pustaka dilakukan dengan metode Systematic Literature Review. Pengolahan dan analisis data wawancara menggunakan metode thematic analysis. Pengumpulan data pada penelitian ini dilakukan melalui observasi data pariwisata, observasi data pada online travel agent, wawancara kepada stakeholders (regulator, asosiasi hotel, akademisi, pengelola hotel, online travel agent, dan wholesaler), serta observasi terhadap sistem BI yang telah ada. Penelitian ini menghasilkan tiga hasil penelitian utama. Untuk memahami konteks ekosistem industri akomodasi, penelitian ini mengkaji penelitian terdahulu dan menghasilkan model downstream supply chain industri akomodasi di Indonesia saat ini. Untuk memahami permasalahan implementasi sistem BI, penelitian ini juga mengkaji dan menghasilkan analisis hambatan menggunakan kerangka kerja Technology Organization Environment (TOE) serta pemetaan tindakan yang dapat dilakukan. Berdasarkan kedua hasil tersebut, penelitian ini mengembangkan sebuah arsitektur dan prototipe high-fidelity sistem BI. Prototipe yang dihasilkan masih berupa front-end berbasis web dan belum sampai kepada pengembangan back-end. Evaluasi arsitektur dilakukan melalui wawancara kepada tujuh narasumber ahli serta pengujian inter-rater reliability kepada 18 responden yang menghasilkan tingkat persetujuan yang sangat baik (koefisien Fleiss-Kappa 0,933). Evaluasi prototipe dilakukan melalui wawancara serta survei System Usability Scale (SUS) yang menghasilkan nilai 74,5 (baik), dan Usability Testing yang menghasilkan nilai 70 (baik). Hasil penelitian ini bermanfaat sebagai panduan bagi regulator dan pelaku industri akomodasi dalam mengembangkan sistem BI yang mendorong kolaborasi data melalui information sharing untuk mendukung proses revenue management di industri akomodasi di Indonesia. Sebagai saran pengembangan, penelitian berikutnya dapat mempelajari aspek-aspek non-fungsionalitas serta mengimplementasikan back-end dan komponen-komponen yang sudah diidentifikasi di dalam arsitektur sistem BI ini.

.....One of the challenges faced by the accommodation industry in Indonesia is the difficulty of making decisions based on reliable data and information. Currently, Indonesia does not have comprehensive tourism

business data and there is no national-scale tourism information center that can be used by stakeholders. To obtain data, the majority of accommodation managers still practice information sharing manually and have not used an integrated system. This research aims to develop an architecture and prototype (front-end) of information sharing-based business intelligence (BI) systems to support the revenue management process in the accommodation industry in Indonesia. The research approach used is Design Science Research which produces solutions according to the needs of stakeholders in the accommodation sector. Literature review is carried out using the Systematic Literature Review method. Processing and analysis of interview data is carried out using thematic analysis method. Data collection in this study was carried out through observation of tourism data, observation of data on online travel agents, interviews with stakeholders (regulators, hotel associations, academics, hotel managers, online travel agents, and wholesalers), as well as observation of the existing BI system. This study produced three main research results. To understand the context of the accommodation industry ecosystem, this study examines previous research and produces a downstream supply chain model, especially for the current accommodation industry in Indonesia. To understand the BI system implementation problems, this study also examines and produces a barrier analysis using the Technology Organization Environment (TOE) framework as well as mapping actions that can be taken to implement and run the BI system. Based on these two results, this research developed an architecture and prototype of a high-fidelity BI system. The prototype is still a web-based front-end and has not yet reached the back-end development. The architectural evaluation was conducted through interviews with seven experts and inter-rater reliability testing to 18 respondents which resulted in a very good approval rate (Fleiss-Kappa coefficient 0.933). Prototype evaluation was conducted through interviews as well as a System Usability Scale (SUS) survey which resulted in a score of 74.5 (good), and Usability Testing which produced a value of 70 (good). The results of this study are useful as a guide for regulators and accommodation industry players in developing a BI system that encourages data collaboration through information sharing to support the revenue management process in the accommodation industry in Indonesia. Future research can study non-functionality aspects and implement back-end and components that have been identified in this BI system architecture.