

Analisis Faktor Keberhasilan Implementasi Data Analytics Pada Perusahaan Manufaktur = Analysis Of Success Factors For Data Analytics Implementation In Manufacturing Companies

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Abstrak

Karakteristik dari transformasi digital pada manufaktur adalah penerapan teknologi mutakhir yang mendukung proses dan informasi yang terkoneksi antara mesin-mesin produksi, dan produk serta adaptabilitas tinggi dari suatu sistem produksi. Dalam mencapai tujuan utama Industri 4.0 yaitu smart manufacturing yang dapat merespons fluktuasi permintaan pasar terhadap produk berkualitas tinggi, dibutuhkan penerapan teknologi yang dapat mengumpulkan dan menganalisis data yang menghasilkan solusi secara cerdas disebut sebagai pemanfaatan Data Analytics. Tujuan pada penelitian ini adalah memberikan rekomendasi strategi berupa urutan prioritas kriteria kesuksesan untuk dapat digunakan para pemangku kepentingan di perusahaan manufaktur dengan melakukan implementasi transformasi digital yang efektif. Metode AHP (Analytic Hierarchy Process) digunakan pada penelitian ini untuk mendapatkan prioritas faktor kesuksesan yang menjadi dasar rekomendasi strategi dalam meningkatkan efektivitas implementasi Data Analytics pada manufaktur. Hasil penelitian ditemukan bahwa 3 faktor kesuksesan teratas adalah Effective data driven communication (People & Management), Technology & Infrastructure Integration (Technology) kemudian Training & Upskilling (People & Management).

.....Technological developments always create new challenges for organizations to adapt so that they remain competitive. Today, organizations are dealing with rapid technological developments and the disruption of digital transformation. The characteristics of digital transformation in manufacturing are the application of the latest technology that supports so that processes and information are connected, between production machines, and products as well as the high adaptability of a production system. In achieving the main goal of Industry 4.0, namely smart manufacturing that can respond to fluctuations of market demand for high-quality products, it is necessary to apply technology that can collect and analyze data to produce intelligent solutions, which is often referred to as the use of Data Analytics. Literature study shows that there are various barriers or barriers in the implementation of Data Analytics in manufacturing companies. However, none of these studies have discussed what success factors need to be prioritized for treatment. This causes the implementation of Data Analytics in manufacturing to be less effective. The aim of this research is to provide strategic recommendations in the form of a priority sequence of success criteria that can be used by stakeholders in manufacturing companies to be able to implement effective digital transformation.

Determining the priority of handling obstacles in the implementation of Data Analytics is a Multi-criteria Decision Making (MCDM) problem, the AHP method is used in this study to obtain priority success factors which are the basis for strategic recommendations in increasing the effectiveness of Data Analytics implementation in manufacturing. From the research results, it was found that the top 3 success factors were Effective data driven communication (People & Management), Technology & Infrastructure Integration (Technology) then Training & Upskilling (People & Management).