**PERANCANGAN SISTEM MANUFAKTUR DENGAN PENDEKATAN *ENTERPRISE RESOURCE PLANNING* (ERP) & *MANUFACTURING EXECUTION SYSTEM* (MES) DENGAN *METODE RAPID APPLICATION DEVELOPMENT* (RAD)**

**(STUDI KASUS: PT. XYZ)**

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**ABSTRACT**

 *This study describes the project management stages of ERP & MES system prototype design at PT. XYZ with the Rapid Application Development (RAD) method, the application development process is carried out by the vendor. In order to support the success of the application system prototype design, it is necessary to have internal data of existing companies, proposed business processes and the flow of interaction between functionals which are described by use case diagrams.*

*PT. XYZ is a company engaged in food manufacturing (food industry). At PT. XYZ in terms of transaction recording activities and data processing is still manual by recording in books and processing data with a computer using Microsoft Office Excel software, such as sales forecasts, PO customer records, production planning, calculation of material requirements for production, inventory control and product delivery plans, in existing conditions because the internal operational process is still manual so that the delivery of consumer products is more than seven days and it is found that there are several times delays in product delivery to consumers, the lead time of product delivery is expected to be less than seven days since the PO is received from the customer with a note the condition of raw materials for production is available. Along with the increase in sales volume every year, more efficient operational processes are needed both in terms of time and cost, to support future business development it is necessary to implement an integrated inter-functional ERP & MES information system.*

***Keywords****: ERP, MES, Development of Information System, SWOT, RAD*

**ABSTRAK**

Penelitian ini menjelaskan manajemen proyek tahapan rancangan *prototype* sistem ERP & MES di PT. XYZ dengan metode *Rapid Application Development* (RAD), proses *development* aplikasi dilakukan oleh *vendor*. Guna menunjang keberhasilan rancangan protype sistem aplikasi maka diperlukan data internal perusahaan *existing*, usulan proses bisnis dan alur interaksi antara funsional yang digambarkan dengan *use case diagram*.

PT. XYZ adalah perusahaan yang bergerak dibidang manufaktur makanan (*food industry*). Pada PT. XYZ dalam hal aktifitas pencatatan transaksi dan pengolahan data masih manual dengan mencatat di buku dan mengolah data dengan komputer menggunakan *software* Microsoft Office Excel, seperti *forecast sales*, PO *customer record, production planning*, kalkulasi kebutuhan material untuk produksi, *inventory control* dan rencana pengiriman produk, pada kondisi *existing* dikarenakan proses operasional internal masih manual sehingga pengiriman produk kekonsumen lebih dari tujuh hari dan ditemukan beberapakali mengalami keterlambatan pengiriman produk ke konsumen, *lead time* pengiriman produk diharapkan kurang dari tujuh hari sejak PO diterima dari *customer* dengan catatan kondisi bahan baku untuk produksi tersedia. Seiring dengan bertambahnya volume penjualan setiap tahunnya, maka diperlukan proses operasional yang lebih efisien baik dari segi waktu dan biaya, untuk menunjang perkembangan bisnis kedepannya maka diperlukan impelementasi sistem informasi ERP & MES yang terintegrasi antar fungsional.

**Kata Kunci**: ERP, MES, Pengembangan sistem informasi, SWOT, RAD.

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