

# Commitment Management as a Determining Factor in the Successful ERP Implementation at Manufacturing Companies

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**Abstract**—The development of industry 4.0 with the internet of things and big data caused a shift in the system from analog to digital and from batch processing to real time processing and from standalone system to integrated system where a system is needed to be able to integrate one business process with other business processes in a company. Technological developments have resulted in changes in the manufacturing world where manufacturing industry development strategies are carried out in a coordinated, integrated, and sustainable manner supported by the active involvement of industry players. ERP implementation in the business world especially manufacturing can be a success factor in building sustainable excellence. This study is intended to illustrate commitment management as critical success factors for ERP implementation which is used to develop systems in the manufacturing in Indonesian which become focus by government in making Indonesia 4.0 namely 5 fields food and beverage, textiles and clothing, automotive, chemical, and electronics. ERP benefits to operate our business more efficiently, more visibility and control over inventory, reduction of operational costs, and improved customer satisfaction and retention. The method used in this study was qualitative research with a descriptive approach. The data collection techniques are applied by observations and literature studies. The results show that management support (commitment) is needed not only at the beginning of the project, but also at the time implementation and after the project is completed where ERP is operated by company to achieve business objectives.

**Keywords:** *ERP, commitment, implementation, manufacture*

## I. INTRODUCTION

Technological trends in the current 4.0 era cannot be dammed and will continue to influence specialized businesses in the manufacturing industry. Over the past two years the contribution of the industrial sector to the national Gross Domestic Product has continued to decline. The Central Statistics Agency (2019) noted the growth of large and medium manufacturing industries in the second quarter of 2019 increased by 1.91% compared to the previous quarter and the industry that experienced the largest increase, namely 17.44%, occurred in the metal, not machinery, and the equipment.

In the production process the manufacturing sector is currently preparing to develop the industrial revolution 4.0. Its implementation means the integration of production lines

in the industrial sector with the internet network as the main support and the use of technology will make it more efficient. The government also responded to the Industrial Revolution 4.0 by building programme Making Indonesia 4.0 as a solution in spurring the national manufacturing sector to continue innovating. Innovation and agility will make more efficient and effective manufacture business model. It is believed to accelerate the increase in the competitiveness of the domestic industry significantly.

Indonesian manufacturing is currently in the top position among ASEAN countries with an *Manufacturing Value Added* achievement of 4.5%. While globally, Indonesian manufacturing is ranked 9th of all countries in the world. This success is inseparable from the commitment of the government and management. Commitment is a key factor in determining how an organisation performs and a concept that most managers are familiar with, but which is difficult to describe. [1] Based on that, this study aims to describe how commitment management as a determining factors in the successful erp implementation at manufacturing companies.

## II. LITERATURE REVIEW

### A. Commitment Management

Commitment is the second major component of social capital and a concept that most managers are familiar with, but which is difficult to describe [1]. As in all business dealings, commitment to the strategic alliance relationship must have an instrumental base. Commitment also has an emotional or affective component. Commitment is seen as a fundamental requirement to achieve such desirable outcomes as higher job satisfaction and lower absenteeism [2].

Peolpe with committed will brings an energy, passion and excitement in their works. Level of commitment is related with organizational policy. Three types of commitment have been defined: (a) affective commitment, (b) continuance commitment, and (c) normative commitment [3]. There are seven key factors for creating and sustaining commitment namely :Individuals join of their own free will, the role of uncertainty, start small and build up, joining requires an individual effort, public acts of commitment, clear messages and clear lines of communication [1].

Good payment and job security can increase commitment. The managers in organizations are faced with competing priorities and the most common areas that manufacturing management can show commitment to are production, quality, and safety. The commitment exhibited management can impact a variety of areas, including employee attitude. Management commitment will influence employee behaviors, commitment, and job satisfaction [4]. Top management support (TMS) is considered, in the literature, as one of the most relevant critical success factors when a company aims to implement an information system/information technology [5].

*B. Enterprise Resources Planning*

High levels of competition and unpredictable business conditions resulting in disturbances known as the VUCA era (Volatility, Uncertainty, Complexity, and Ambiguity). Shankarnarayanan, 2000 stated this increases the pressure on companies to lower total costs in the entire supply chain, shorten throughput times, drastically reduce inventories, expand product choice, provide more reliable delivery dates

and better customer service, improve quality, and efficiently coordinate global demand, supply, and production [6].

Enterprise Resource Planning (ERP) systems are highly integrated enterprise-wide information systems that automate core business processes [7]. Several studies claim that the major challenges in implementing ERP relate to people, organizational, and change management rather than technological conditions [8]. There are six risk categories: organizational, technical, project management, system, user, and technology categories of risks which have impact on ERP implementation success[9].

There are many function support by ERP in company such Financial, Human Resources, Operations & Logistic, Sales & Marketing. Enterprises resource planning (ERP) systems today represent indispensable solutions for management of an organization [10]. Enterprises resource planning (ERP) implementation consist pre-implementation, implementation and post-implementation stages. Implementing an ERP system involves reengineering existing business processes to meet the best business process standard [11] and the conceptual framework are [12]:

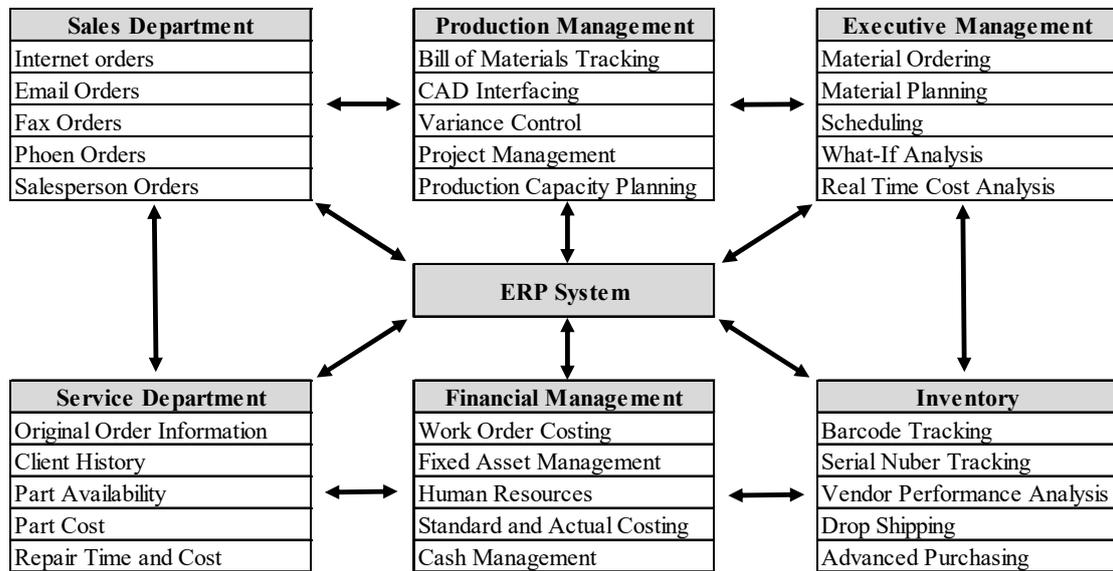


Fig.1. Conceptual framework of ERP system

**III. METHOD**

The method used in this study was qualitative research with descriptive approach. The data collection techniques applied by literature study. We take 5 (five) big company in field manufacturing which become government focus namely food and beverage, textiles and clothing, automotive, chemical, and electronics. We pitch the popular and biggest company to be observation are PT. Indofood Sukses Makmur, Tbk.( food and beverage), PT. Sri Rejeki Isman, Tbk. (textiles and clothing), PT Toyota Motor Manufacturing Indonesia (automotive), PT. Chandra Asri Petrochemical, Tbk.(chemical), PT. Telekomunikasi Indonesia, Tbk.( electronics).

**IV. RESULTS AND FINDINGS**

Manufacturing companies are characterized by complexity and overlapping of production processes, diversified processes, operating in a dynamic environment, organizational and technological complexities. The Government of Indonesia continues to be committed to building a manufacturing company with regional competitiveness in 5 fields, namely:

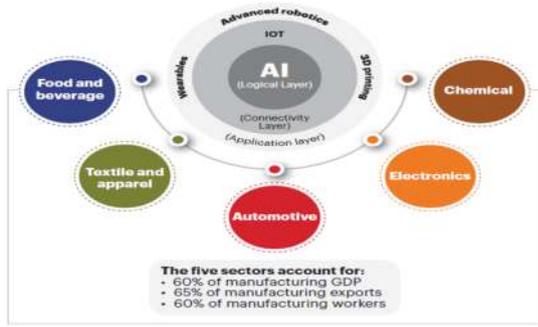


Fig.2. Making Indonesia 4.0 five manufacturing industry sectors

There are dozens of vendors of ERP systems. However, the top five ERP system vendors are SAP, Peoplesoft, Oracle, J.D. Edwards, and Baan. SAP has been recognized as the market leader. In fact, 59% of the executives in the survey

said that their organization benefited greatly from the ERP system. Manufacture company in Indonesia almost using ERP SAP R/3. SAP R/3 is a popular ERP and has been used by most of the world-class companies to support their daily business process activities. R is meaningful collecting data in real time and related to the three-layer application architecture: database, application server and SAPgui client. Overall, SAP R / 3 is divided into three functional areas as follows finance, logistics, and human resources. SAP uses the fourth generation of programming called Advanced Business Application Progress (ABAP).

Results of research of commitment management as succes factor in implementation ERP by conducted through data collection techniques, observation and documentation study obtained the following results:

Table 1. Dimension Of Commitment Management

Author and concept	Commitment Management Dimensions	Manufacture Company				
		Indofood	Sri Rejeki	TAM	Chandra Asri	Telkom
Burgess & Turner,2000	Individuals join of their own free will	Yes	Yes	Yes	Yes	Yes
	The role of uncertainty	Yes	Yes	Yes	Yes	Yes
	start small and build up	Yes	Yes	Yes	Yes	Yes
	Individual effort	Yes	Yes	Yes	Yes	Yes
	public acts of commitment	Yes	Yes	Yes	Yes	Yes
	clear messages	Yes	Yes	Yes	Yes	Yes
	clear lines of communication	Yes	Yes	Yes	Yes	Yes

TABLE II. DIMENSION OF ERP IMPLEMENTATION

Author and concept	ERP Implementation Dimensions	Manufacture Company				
		Indofood	Sri Rejeki	TAM	Chandra Asri	Telkom
Dowlatshahi (2005)	Sales Department (SD Module)	Yes	Yes	Yes	Yes	Yes
	Service Department (CS Module)	Yes	Yes	Yes	Yes	Yes
	Financial Management (FI-CO Module)	Yes	Yes	Yes	Yes	Yes
	Inventory(MM Module)	Yes	Yes	Yes	Yes	Yes
	Production Management (PP Module)	Yes	Yes	Yes	Yes	Yes
	Executive Management (PM, PS, HCM, QM Module)	Yes	Yes	Yes	Yes	Yes

Those dimensions show that all of the company above using ERP SAP R/3 system. The success of ERP implementation is not only determined by technical factors,

the role of organization (management) contributes in determining the success of ERP implementation.

## V. CONCLUSIONS AND SUGGESTIONS

The relationship of urban forests to the economy, from the calculation of the economic potential of urban forests through three approaches, namely willingness to pay, the economic potential of carbon dioxide absorption, and the potential economic value of water catchment, shows that there is a potential economic value of Rp.11,746,327,240 / year.

### A. Conclusions

ERP implementation requires collective and collaborative action [13]. Benefits of ERP systems require longitudinal review of organizational performance [14]. Management support (commitment) is needed not only at the beginning of the project, but also at the time of project implementation and after the project is completed where ERP is operated by company to achieve business objectives. Top management commitment is considered a significant factor in improvement programmes in implementing a quality management system. Change Management is required in ERP implementation. Communication between stakeholders about effects & benefit from the 'change' through the implementation of a new ERP system is needed[15].

### B. Suggestions

In every stage of the ERP implementation process, it must be ensured that all changes related to the time, costs and business processes must have support (commitment) and approval from top management. This is to ensure that every ERP process can run well, so that the target time and cost can be achieved. ERP vendors must do mapping and make weight of each critical success factor (CSF) of ERP implementation, so they can have a strategy to improve rate of successful ERP implementation.

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