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STUDY ON SYSTEM APPLICATION PRODUCT (SAP) – AN IMPORTANT ENTERPRISE RESOURSE PLANNING TOOL FOR ACHIEVEMENT OF ORGANISATIONAL VISION, MISSION AND OPERATIONAL PERFORMANCE

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Abstract - *After the awake of globalization the business dimensions are very rapidly changing. The country specific challenges are added with the global economic conditions. No part of business irrespective of the scale of operations remained unaffected by the Global situations. This has compelled Indian Automotive component manufacturing Industry to change the way of carrying out business drastically. They had to leverage on the world class systems to be competitive, sustain in Global market and win in long term. Process integration and a seamless flow of information and data between various functions became the key to performance. A right choice of Enterprise Resource Planning (ERP) application was required to address this need. There are multiple enterprise resource planning (ERP) Applications are available in the market viz. Oracle applications, SAP, JD Edwards, PeopleSoft, Microsoft etc. SAP is a proven and widely used ERP application which is capable of integrating multiple business modules, with each module representing a specific business function. Various modules in SAP application update and process transactions in real time mode. It has the ability to be configured to meet the varied needs of the business..*

Key Words: System application product, Enterprise recourse planning tool, organization, vision, mission, operational performance.

1. INTRODUCTION

With the awake of Globalization, Indian Automotive component manufacturing industry got enormous growth opportunity, but at the same time it started facing newer challenges of the new era. The prevailing pricing due to the buyer's market arising out of the steep competition shrunk the profit margins drastically. The Industry realized that it will not be any more profitable to do a business in the same manner, they were doing in past. While, automotive market was growing very rapidly in India, it was necessary to be competitive to catch up with growth and remain profitable. Cost cutting was the major avenue seen to increase the profit margin and sustenance in the market was banked upon highly competitive pricing.

To reduce the cost, Industry realized, there was no other way than making overall improvements in the operations. To achieve overall improvements, Industry put them self into a great deal of introspection. The major deficiency was observed in the integration of the different business functions. Industry realized the need of a tight integration of the different business processes. This was the need of Information and data flowing through the business processes. A need of seamless information and data flow, demanded Industry to make use of a well-integrated Enterprise resource Planning (ERP) tool. SAP had immerged as a robust ERP tool which can meet the industry demands.

The present study therefore deals with various aspects of SAP as ERP tool and how it helps achieving overall operational improvements. Following aspects are covered as part of this study

- Evolution and Journey of SAP as ERP application – The objectives and benefits
- The functional aspects of SAP – like Enterprise Modules, integration and technical aspects
- SAP implementation methodology and approach
- India Automotive component manufacturing industry – history, business challenges
- Significance of SAP in addressing the business challenges posed to Automotive component industry in India.

SAP has evolved many new dimension products which complement the use of SAP ERP product and improves the efficiency of business. Such study for auto component manufacturing industry is not seen.

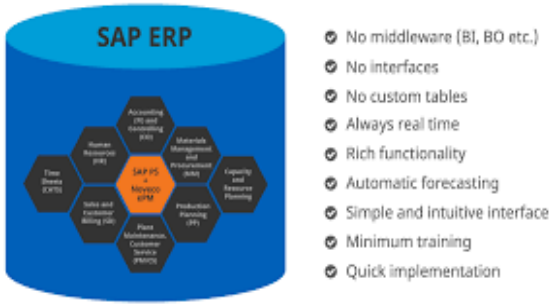

Fig-1: SAP as ERP

Many companies find that they have problems with their end-to-end processes. That is where they can implement SAP ERP to sharpen their core function with the end-to-end process. It will help them to automate their enterprise and they will be able to keep their operational processes up to date with the ever-growing industry. SAP can help to execute ERP solutions in various areas of industry. SAP ERP is used around the world, in more than 100 countries, which turns out to be more than 50000 clients worldwide. Those numbers are expected to grow as more and more enterprises use the SAP ERP bandwagon. Companies love the fact that they get real time updated information so they can keep their edge and stay ahead of the game.

This research topic therefore encompasses various aspects of SAP as an ERP software and also deals with the Challenges of Indian automotive component industry and how SAP can benefit in these areas of challenges to achieve overall improvements.

1.1. Meaning of sap

SAP is the acronym of System Application Products. As mentioned earlier, SAP is a widely used and proven ERP application. SAP utilizes ERP software applications to improve the performance of organizations' resource planning, management control and operational control. SAP software is multi-module application software that integrates activities across functional departments, from product planning, parts purchasing, inventory control, product sales and distribution, plant maintenance, quality control, human resource as well as finance and controlling. Many other functions can be integrated using SAP software application.

1.2. SAP implementation as ERP application

The goal of SAP is to improve and streamline internal business processes, which may sometimes require reengineering of current business processes. The common objectives which most of the industries put across SAP implementation as follows

Business Visibility - SAP integrates business functions and provides the reports on various aspects of the business functions. This creates a visibility in the overall business. This visibility helps taking major operational decisions.

Alignment of strategies with operations – The business strategies decided by top management are executed in business operations. SAP helps to achieve such alignment in planning and utilization of business resources across various business functions.

Reduce business risk: SAP provides a support of seamless data and information across business functions which reduces business risk

Improve financial management and enforce controls: Business transactions in SAP are tightly integrated and result into appropriate financial impact. This helps making financial control documents easily available and accessible to top management to enforce required controls.

Benchmark and measure operational performance parameters – SAP helps to set up and measure benchmark for operational performance parameters which ultimately result into improve efficiency and cut cost.

The components of an SAP system are the common components of a Management Information System (MIS).

- **SAP Software** - Module based ERP software is the core of an ERP system. Each software module automates business activities of a functional area within an organization. Common ERP software modules include product planning, parts purchasing, inventory control, product distribution, order tracking, finance, accounting and human resources aspects of an organization.
- **Business Processes** - Business processes within an organization falls into three levels - strategic planning, management control and operational control. ERP has been promoted as solutions for supporting or streamlining business processes at all levels. Much of ERP success, however, has been limited to the integration of various functional departments.
- **SAP Users** - The users of ERP systems are employees of the organization at all levels, from workers, supervisors, mid-level managers to executives.
- **Hardware and Operating Systems** - Many large ERP systems are UNIX based. Windows NT and Linux are other popular operating systems to run ERP software. Legacy ERP systems may use other operating systems.

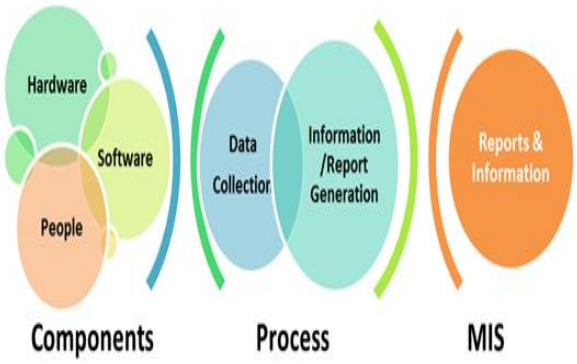

Fig-2: MIS architecture

2. RESEARCH GAP

After studying various papers published in journals and other literature with related subject, few gaps were identified. Such gaps are mentioned below.

- There is sufficient study found on SAP but the journey of SAP as ERP product and it's maturity with time is not well complied in any single research
- Objectives of SAP implementation are covered in various studies but it varies in different studies because the objectives vary company to company. Thus a holistic compilation of standard set of objectives at one place is missing in any single study
- A collective view of SAP's different versions created from the beginning and relevant software, hardware, modular structures at one place is not available in previous studies
- There are ample studies available which talk about the challenges of the Auto component manufacturing. But, the studies lack the focus on the use of SAP to track relevant information in the study and produce the reports to help overcoming such challenges
- The post SAP implementation scenario is not properly covered in the previous studies

A collective study of various implementation methods used for SAP implementation and the reasons of failures are not properly covered in any single research

3. LITERATURE SURVEY

Nasscomm (2008) "IT adoption in the Indian auto component industry" has come up with a detailed study related to the overall IT adoption in autocomponent industry in Indian context. The current challenges of auto component industry, the growth potential & need of IT adoption is elaborated in the study. Various challenges in IT adoptions are also discussed in the study..

Rubina Adam, Paula Kotzé, Alta van der Merwe (2011) "Acceptance of enterprise resource planning systems by small manufacturing enterprises" have mentioned with their study that limited research has been done to understand the acceptance of ERP systems by small enterprises as compared to the bigger companies. They therefore attempt to addresses this gap by considering the strategic, business, technical and human factors that influence the acceptance of ERP systems in small manufacturing enterprises. They have provided a consultative list of acceptance factors in the research which can guide future initiatives aiming to ensure the acceptance of ERP systems by small manufacturing enterprises.

Akondi Srikant (2012) "Significance of BPR and ERP Implementation in Healthcare Industry" imbibed the significance of business process reengineering and ERP implementation in Indian healthcare industry. In the process reengineering the existing processes are challenged and the processes which are universally used in the particular industry are adopted. ERP implementation also strongly suggests removing the non-standard processes and recommends standardization. This helps the industry to compete & perform better in the segment. Although the study is about healthcare, it is also applicable to other segments in manufacturing.

Dr. Manas Kumar Sanyal, Sajal Kanti Bhadra, Sudhangsu Das (2012) "ERP implementation issues and challenges: A FISHBONE analysis in context to Indian industries" have focused their study on the Indian ERP implementations. They applied Fishbone analysis to identify the critical issues for Indian industries as they experienced during implementation of ERP in their organizations. Their findings show that certain factors, like improper system implementation strategies, lack of well-defined scope of implementation procedures, improper project planning and huge customization of the system selected for implementation etc, have significant influences on the successful ERP implementations.

Indian brand Equity foundation (2012) "Operational excellence in Indian Manufacturing" in this study has explained the effort Indian manufacturers are taking to achieve operational excellence. It is explained how adopting World class manufacturing practices, implementing lean manufacturing practices is helping to reduce costs & being competitive. Adoption of Total Quality Management (TQM) has improved the product quality. Increasing use of IT solutions such as ERP, Manufacturing execution systems (MES) has created required online data which enables faster decision making.

S.Hanumanth Sastry, Prof. M.S.Prasada Babu (2013) – "ERP implementation for Manufacturing Enterprises" have emphasized that the issues like demand fluctuations, balancing of demand supply elements & controlling operational cost cause acute customization at ERP backbone. They have also emphasized that the successful implementation of any ERP project requires all stakeholders having a clear understanding of their role and responsibility in the process, as well as realistic expectations about the post implementation scenario.

Subhash Chander Verma (2013) "A study of factors responsible for growth, sickness, and Mortality of SMEs (bought out parts and ancillary) in MIDC Pimpri-chinchwad" has mentioned that the small scale industries are the backbone of the Indian economy. They fulfil the need of large scale industries by providing semi-finished parts at very competitive costs. He has also mentioned the factor which influences the growth of SMEs & the reasons contributing towards the sickness of SMEs.

Londa L Lau (2010) "Managing Business with SAP: Planning, Implementation and Evaluation" This book provides a comprehensive overview of the various parameters for the successful implementation of the SAP as ERP application. This book is divided into three major sections. The first section introduces the foundation for ERP and the SAP technology. The second section deals with the evolvement of major activities of SAP since its inception from 1972. The third section explains how academicians can successfully integrate knowledge of the SAP R/3 systems into the undergraduate and graduate college courses.

IBM study paper (2004) "Challenges for the automotive industry in an on demand environment" contains the study conducted by IBM Business consulting who interviewed many business experts in automotive industry. The purpose of this paper is to present a short overview of the automotive industry and highlight challenges faced by the industry in the given period.

Timothy J. Sturgeon Johannes Van Biesebroeck (2010) "Effects of the Crisis on the Automotive Industry in Developing Countries "has published this paper as a research paper supported by Global Trade and Financial Architecture (GTFA) project. This paper examines the impact of the recent economic crisis on global value chains (GVCs) in the automotive industry. The objective of the paper is to provide a comprehensive view in this important industry, examine government responses to the recent economic crisis, and provide a picture of where the industry is headed i.e. a future of the industry, particularly in light of the increasing importance of both production and consumption in large developing countries such as China and India.

4. RESEARCH METHODOLOGY

The proposed work involved in this study and the methodology adopted for the proposed research work is as follows

Proposed research work

The proposed work involved is basically studding various aspects of SAP & auto component industry

Study of various aspects of SAP as indicated below

- SAP Evolution, journey and current status
- SAP modules
- SAP architecture and database
- SAP implementation methodology and approach

Study of various aspects of automotive component industry as indicated below

- Automotive component Industry – brief history and current status
- Challenges
- A case study – How SAP implementation helped to achieve improvements

Interviews of the relevant authorities in respective fields (SAP as well as Automotive component Industry)

The interviews of various authorities such as SAP consultants and practitioners, SAP project managers, automotive component manufacturers & the operation leaders in auto component industry would be conducted

4.1. Objectives

Objective of this research is mainly to cater information, facts, data and analysis to the various segments of people viz. Auto component manufacturers, SAP professionals. Researchers and students

- Collective study of business challenges faced by Auto component manufacturers and make them aware how SAP can capture relevant information and generate reports to help in the decision making
- Provide information to Auto comp manufacturers how their business processes can be integrated by using SAP
- Provide a collective information of various aspects of SAP such as its software products, hardware, modular structure, to benefit researchers, students and entry level SAP professionals
- Provide collective view on SAP's development as ERP product over the time period and create

comparison of SAP's business growth with competitors in same space

Provide information on implementation methodology of SAP and the reasons behind the failed SAP implementations

4.2. SAP Modules

SAP works on 3 core functional areas such as Logistics, Finance and Human resources. Different modules are created in these functional areas, which are tightly integrated with each other.

- Logistics - Logistics
    - Sales and Distribution (SD)
    - Material Management (MM)
    - Warehouse Management (WM)
    - Production Planning (PP)
    - Plant Maintenance (PM)
    - Project System (PS)
    - General Logistics (LO)
    - Quality Management (QM)

Fig-3: Logistics module

- Financial
    - Financial Accounting (FI)
    - Controlling (CO)
    - Enterprise Controlling (EC)
    - Investment Management (IM)
    - Treasury (TR)

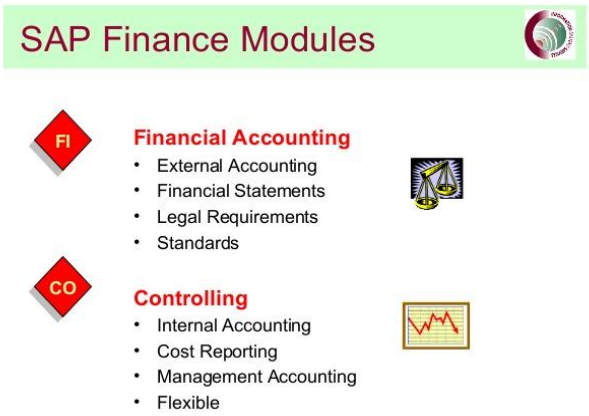

Fig-4: SAP accounting module

- Human Resources
    - Personnel Administration (PA)
    - Personnel Development (PD)

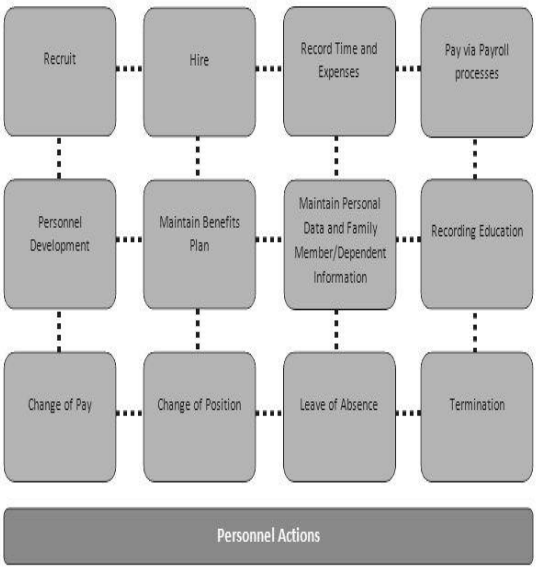

Fig-5: SAP HR Module

Apart from the core functions described above, SAP has also come up with some high end modules like Customer relationship management (CRM), Supplier relationship management (SRM, Product Lifecycle Management (PLM), Business intelligence and Business objects (BI-BO) etc.

3. CONCLUSIONS

This paper discussed about the SAP development in organization any module in the ERP system is implemented by the consultants engaged by the company. After the implementation (installation), the system has to be used by the employees of the company who are called

the end-users. They have to be accustomed to the way the system works to get optimum benefit from the system. Using the software at the end or after the implementation is an End User is the one who performs transactions in SAP after it goes live. Since the financial position of Indian farmers is very weak, the loan facility provided by the industries through Bank encourages the farmers to grow more cane and also motivates the farmers. The loan amount is paid immediately to the Bankers from the farmers through factory will also increase the transactions of the Bank in turn both bankers and farmers are mutually benefitted.

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