ERP Implementation at EICHER TRACTORS: A Case of Effective Strategy

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ABSTRACT
Enterprise Resource Planning (ERP) system is a business management system that comprises integrated sets of comprehensive software, which can be used, when successfully implemented, to manage and integrate all the business functions within an organization. Implementing an ERP system requires extensive efforts to transform the organization’s processes. Failures of ERP system implementation projects have been known to lead to organizational bankruptcy. The following case study demonstrates the successful implementation of SAP ERP system at Eicher Tractors and the benefits obtained through this implementation.

Keywords: ERP, SAP, Business Case Rationale, Gap analysis, Configuration

Introduction
In late 1980s and early 1990s, the ERP Vendors promised organizations, a proposition of seamless integration and a rosy picture of total enterprise integration through their integrated product called Enterprise Resource Planning Systems/Enterprise Systems. The quantifiable benefits that are often cited in various ERP implementations are cycle time reductions, reduction in inventory levels, reduction in head counts, reduction in working capital and many other operating cost reductions. The intangible benefits often attributed to ERP systems are improved customer satisfaction and better decision making.

THE EICHER GROUP
Eicher Tractor Corporation of India Ltd. was incorporated in 1958. In 1996, Eicher Tractors Ltd. amalgamated with Royal Enfield Motors to form Eicher Ltd. The Eicher Group has diversified business interests in design & development, manufacturing and local/ international marketing of Trucks & Buses, Motorcycles, Automotive Gears and components.
In addition to this, Eicher has also invested in the potential growth areas of Management Consultancy Services, Customised Engineering Solutions, City Map & Travel Guides.

EICHER TRACTORS
Eicher Motors Limited disinvested the businesses of Tractors & Engines to TAFE Motors and Tractors Limited (TMTL) in June 30, 2005. Tractors and Farm Equipment Limited (TAFE) is a part of the Chennai based Amalgamations group, a US$ 1 Billion light engineering group with diverse interests in Tractors and their aggregates, Diesel Engine, Automobile Components, Engineering Tools, Paints, Plantations etc. TAFE produces tractors in the 25 to 90 HP range in a variety of models. TAFE acquired Eicher Tractor business in June 2005 through a wholly owned subsidiary, viz., TAFE Motors and Tractors Limited (TMTL). TAFE is an ISO 9000 certified company that believes that quality is not something that is inspected or input into a product.

Thus, today Eicher Tractors is a 100% subsidiary of Tafe Ltd, the flagship company of Amalgamation Group. Tafe is ranked as one of the top 2 Tractor Mfg Company in India with a market share of 27%.
ERP Project at Eicher Tractors:

Business Case Rationale

The pre-implementation phase is typically kicked off soon after the idea of ERP adoption is initiated, which may originate naturally from the perceived business needs of the company, or be inspired by an external party such as a business or IT consultant. In any case, such a preliminary idea must first gain the support by the senior management; with the consent of commitment at least to the extent necessary for further considerations of ERP adoption should it be justified by the business needs of the company.

Prior to ERP, Eicher Tractors had several home grown solutions based on Oracle in various departments such as Materials, Finance etc. These were not integrated with each other. Due to less data transparency and fragmented data, there were inefficiencies arising. There was a need to put into place a more robust system that would handle all this data inconsistency.

The Eicher Tractor plant at Faridabad and Bhopal had quite similar products and there was a need to integrate these plants also so as to have more coordination and data transparency.

The other reason for implementing an ERP was the need to link to the suppliers as well as customers for increasing organizational productivity and profits. This wasn’t possible until and unless a unified view of the business was available to one and all. This led to the top management decision to implement an ERP system. The impending Y2K problem was another reason seen for making changes to the IT infrastructure.

Pre-evaluation Screening and Package evaluation

Owing to limitations in available resources, the complexity of ERP systems, and the diversity of alternatives, selecting an ERP project is a time-consuming task. But, the greater the effort involved in ERP selection, the greater the chance of overall success.

This phase consists of two steps. In the first step, a project team is formed. It consists of top managers or decision makers, executive managers, stock holders, functional experts, users or their representatives. The project team then has to model business processes and reengineer them as much as possible. During the processes analysis period, the functional characteristics of required ERP software are recognized to some extent. In the second step, as much information about ERP vendors and systems as possible are gathered from all possible sources including the internet, magazines, exhibitions and so on.

In 1997 the ERP selection process at Eicher Tractors, began with the selection of IBM as the implementation partner. RFP was created by the project team which was matched with the product offerings of several ERP players such as MFG PRO, BAAN and SAP. The main points considered to evaluate and compare the various packages with each other were things such as volume of data to be handled, ease of use, the product flexibility, name and experience in the automotive sector. On the basis of these criteria, the company selected SAP Enterprise 3.0 as the right solution. The company chose 6 modules of SAP 3.0, FI, MM, PP, QM, CO and SD for implementation.

Project Planning Phase

Planning for an ERP implementation means determining deadlines, schedules, priorities, resources that would be required, activities and tasks that would be needed to be completed, etc.
It was in this phase that Eicher selected the Chennai office, where Enfield Bullet was being manufactured, as the Pilot Site because of its much smaller size compared to other sites as well as the presence of Skill Sets at Chennai site.

**Gap Analysis**

It has been estimated that even the best ERP package, custom tailored to a company’s needs, meets only 80% of the company’s functional requirements. The remaining 20% of these requirements present a problematic issue for the company’s BPR. There are several options for filling up this 20% gap.

1. Designing a custom program.
2. Identifying a third-party product that might fill the gap, which hopefully partners with the ERP packages, interfacing to a minimum.
3. Altering the ERP source code which is (the most expensive alternative; usually reserved for mission critical installations)
4. Pinning your hopes on an upgrade(low cost but risky)

At Eicher Tractors one of the major problems encountered in the software was that it did not comply with the Indian taxation laws. Thus the company had to implement an in house taxation module along with SAP. The company also has an in house module on Plant maintenance and an SD application of Warranty module. The SD Warranty module application hanldes those Eicher Tractor’s information which have been sold under and are repaired or returned within the warranty period.

**Reengineering**

An issue with packaged software is the potential for incompatibility with the organization’s needs and business processes. The literature suggests that improvements in organizational performance require the restructuring of organizational business processes to fit the software.

**Configuration**

Successful ERP implementations are often the result of minimal customization as customization is usually associated with increased IS costs, longer implementation time, the inability to benefit from vendor software maintenance and upgrades, etc.

At Eicher Tractors also, this was the guideline. The modules were configured at the pilot site, that is the Chennai office and the change management process was devised, with 95% of the structure being retained and only 5% of customization done to the SAP software.

**Implementation Team Training and End User Training**

The role of training to facilitate software implementation is well documented in the MIS literature. Lack of user training and failure to understand how enterprise applications change business processes frequently appear to be responsible for many problem ERP implementations and failures. Given the complexity of ERP systems, training is essential through the acceptance stage. Training takes on a moderately important role during the latter stages, when training on a continuous basis is required to meet the changing needs of the business and enhance employee skills.

Eicher picked up domain experts from different fields and different sites and trained them at the Chennai office. For example the VP Manufacturing at Bhopal was the domain expert in MM module and was trained for this module so that he would be the project champion and guide for the MM module at the three plants of Bhopal, Faridabad and Alwar. Similarly a designated Manager from Parwanoo was the Trained Domain expert for PP module and a designated manager from Pithampur,
Indore was to be trained as the domain expert for SD module. These domain experts then provide training to selected managers at each site and thus the user training was done in a very systematic manner.

**Going Live**

The first rollout of SAP 3.0 was done in Chennai plant in December 1998, whereas the rest sites implemented the software almost in a Big Bang strategy, with Faridabad going live in April 1999, Alwar going live in May 1999 and Bhopal going live in June 1999. The complete process of ERP selection and implementation thus took around 15 months which was justifiable, since it involved purchase and training of around 500+ user licenses. According to the project estimates, the ERP project was implemented before time and it quite complied to the budget as well.

**Post implementation (Maintenance mode)**

Due to the use of a well designed Formal implementation plan and presence of adequate top management support and commitment, the company easily got over implementation problems such as lack of proper in house expertise in ERP. Unsuitability of hardware was done away with the purchase of adequate hardware required for 500+ user licenses. Due to well designed training program, and thus proper communication with the end user, resistance to change was minimum.

The only weak point of such an effective user training program was that many a young users trained on SAP 3.0 eventually left for greener pastures, that is more lucrative jobs, Since at the threshold of Y2K, there was much demand of such professionals.

Today after more than 10 years of ERP implementation, the IT Manager, considers the ERP project to be very successful. The critical success factor for Eicher Tractor was the Top Management support and the effective Project Management which led to its success. The key was to remain focused. The ERP led to quicker response time, improved on time delivery, lower inventory levels and better overall resource management.

The ERP data helps in providing BI capability as well; though SAP has inbuilt BI facility some amount of off SAP BI is also performed by Eicher Managers. Eicher Tractors is further considering implementing several other applications such as Data warehouse, Advanced planning and scheduling system, supply chain management software based on this ERP data.

A major transformation of Eicher’s IT infrastructure took place in 2001 when it decided to centralise its IT operations in Delhi by consolidating the IT infrastructure of five business units—Eicher Motors, Eicher Tractors, Eicher Gears, Eicher Group Office and Eicher Royal Enfield. They wanted to further enhance the hardware configuration to provide centralised services from their corporate office situated in New Delhi. In 2002, again as per the business requirements, it was felt necessary to upgrade the SAP ERP installation from 3.1H to 4.0B. This was to keep pace with changing business scenarios and growing business needs and to keep Eicher’s IT department abreast of the most recent technological developments.

**Conclusion**

If properly managed through effective Project Management, an ERP project can bring about several advantages to any organization. The two most important problems encountered at Eicher Tractors were lack of proper in-house expertise which was handled effectively through user training. The advantages of the SAP system are further accruing.
References


