

# **ERP Implementation in Chemical Industry: A Case Study of Micro Inks Ltd.-Vapi, Gujarat**

**Prof. Sameer K. Rohadia and Dr. Rajesh Khajuria**

---

## **Abstract**

*Enterprise Resource Planning [ERP] based enterprise systems solutions was in high demand initially from multinational corporations and later from the Indian private and public sectors. It attempts to integrate all departments and functions across a company onto a single computer system that can serve all those different departments' particular needs. The ERP systems were gradually been designed, developed and improved by ERP vendors in response to changing technologies and emerging business requirements. The implementation of ERP promises to provide an integrated application environment with fast and seamless access to a single unified business wide information system, hence becoming a catalyst for business process change. This paper examines in detail, the ERP implementation exercise at Micro Inks Ltd, Vapi, Gujarat. It focuses on the issues that led to ERP implementation, its cost, benefits of the implementation on productivity, and problems encountered during implementation.*

**Keywords:** ERP, Micro Inks, ERP Implementation.

---

## **INTRODUCTION**

Micro Inks Limited is part of the Huber Group, Germany. Today, through the years of growth, MICRO has transformed itself into a multi-dimensional, multinational company offering a comprehensive range of quality products, efficient customer service and a wide distribution network.

Micro Inks the market leader in India commanding a market share of above 30% (and more than 40% share of the organized sector). In the process, it also created an enviable track record of one of the fastest growing company. And took its annual sales figures gallop from a mere US \$ 5 million in 1993 - 94 to an astonishing increase to US \$ 240 million.

### **Prof. Sameer K. Rohadia**

Director  
Parul Institute of Management (PGDM Program)  
Limda, Tal: Waghodia  
Vadodara, Gujarat  
rohadiasameer@yahoo.com

### **Dr. Rajesh Khajuria**

Director  
C. K. Shah Vijapurwala Institute of Management  
Vadodara, Gujarat  
dr.khajuria@gmail.com

Through the years of growth, Micro Inks has transformed itself into a multidimensional, multi- location company offering a comprehensive range of quality products, efficient customer service and a wide distribution network. In India, It is a marketing powerhouse with 12 branches, 5 technical centers and around 500 distributors. Micro Inks is also the only Printing Inks Company in India, and amongst two or three companies in the world, to have successfully implemented SAP/R3 solution, integrating its marketing offices through satellite links.

Today the company with a modest beginning has grown and consolidated its strengths, skills and people to achieve a unique enterprise. One of which is on its way to becoming a major player in the global market. A reality, which it achieved through a well thought out and executed business strategy. The Company's core strategy is to offer better value to its customers on the price quality matrix and participating in their programs to deliver better value to the customers' customer. Micro Inks starve for having customers' delight and not only customers' satisfaction.

To make this strategy a success, the Company has stepped up its R and D efforts in order to develop superior products. On a parallel front, Micro Inks has developed technology for backward integration into flushed colours, pigments, resins and additives - the key raw materials for inks. By doing so, Micro Inks is today the only company in the world to be self sufficient in all the critical raw materials of Printing Inks. Finally, all this is to be backed by the best of technical support and customer service. All translating ultimately into one fact, Micro Inks is poised to make an indelible mark on the world.

## THE ERP STORY

In 1994, Micro Inks started commissioning Daman plant and also the planning for bringing ERP into its operations with the agenda to accelerate its inks manufacturing capacities to keep pace with the global demand. This was done with by MICRO with the setting up of one of the world's largest ink manufacturing facilities at a single location, in India in the year 1998. This plant at Silvassa has a world-size capacity of 60,000 metric tonnes. Here Micro Inks manufactures a wide range of inks with innovative and unique process technologies that have never been attempted before in the industry. Apart from this, another world size plant has been set up at Vapi, which produces a wide range of flushed colours, pigments and resins in a single stream plant for 'seamless' manufacturing of inks.

In the same year, i.e. 1998, Micro Inks launched Deltamethrin and became 2<sup>nd</sup> in the world in that product category with a new developed Pigments and Flush Technology. It was with these projects it also implemented SAP/R3 as at ERP solution to support its operations. Micro Inks is currently working with the upgraded version SAP 4.07. MICRO has achieved leadership status in a very short span. It is the creator of mega single-stream plant for 'seamless' manufacture of inks. They have implemented SAP/R3 solutions in all areas of operations. The basic aim behind bringing an ERP package as a solution was to make all the elements work together as a single force to offer value to its customers.

## ERP IMPLEMENTATION INITIATIVES

ERP software package was thought to be a perfect solution in the light of given issues:

- The emphasis was placed on replacing order system prevalent in Ink Industry and to become one of the few in implementing ERP package in Industry;
- Efficiency in terms of being the most cost effective by offering low cost quality inks and to improve the speed of transactions/processes to support new facilities;
- Requirement for better management tools in areas of decision making and planning; and
- To starve to achieve customers' delight and not only customers' satisfaction.

Keeping in view all these issues, the ERP software was implemented with the following modules:

- Finance
- Sales and distribution
- Manufacturing
- Plant Maintenance
- Quality Management
- Material Management

The SAP was integrated with the Human Resource Module which is supported by different software package. The Human Resource Module of SAP did not support the Human Resource Practices of Micro Inks and so instead of changing the HR processes, the HR package was integrated with the SAP. The task of implementing all these modules was easy for the management as the entire organization was passing through the restructuring and implementation of new facilities across single location. As was as Plant Maintenance Module was concerned, the ERP implementation encountered similar challenges as in daily operations as it was developing technologies through R and D.

## PRIMARY OUTCOMES FROM ERP

ERP solutions were perceived to provide the following beneficial outcomes to Micro Inks before they were implemented in the company:

- Integrated business process;
- Build customer loyalty;
- Increase the flexibility across the supply chain; and
- Use the key performance indicators to improve information visibility.

After implementation a review of project outcomes revealed that Micro Inks was successful in getting the following benefits from ERP implementation:

- The new system enhanced the company's regulatory compliance;
- The new system made management information more accurate and accessible;
- The new system allowed them to provide improved service to their employee, management, supplier and customers;
- The new system enhanced their primary users' knowledge and skills;
- The new system increased company's accountability;
- The new system increased their stakeholders' confidence in the company;
- The new systems made it easier to take advantage of new technology;
- The new system enhanced the support of their company's mission;

The major aspect contributing to the success of Micro Inks was that it was able to achieve all these outcomes within 3 to 6 months after implementing ERP product.

## MEASURING IMPACT ON PRODUCTIVITY

The success of ERP implementation is considered incomplete if one fails to measure its impact on the productivity of the organization. It is usually found that whenever a new sophisticated technology is implemented in any organization, it tends to show a decline in its productivity immediately after implementation. It is with the passage of time that productivity increases and the new system show its impact by bringing a significant change in it. Micro Inks witnessed following impacts on its productivity after installing new ERP package:

- Immediately following the implementation, it was capable to maintaining its productivity at the same level.
- Today, their productivity is maintained to the same levels.
- The workload of their departments has decreased significantly and new ERP has not created any new workload issues for its departments.
- The nature of the work of their departments has not changed significantly but had been simplified.

## MEASURING IMPACT ON COMPANY'S MAJOR CONSTITUENCIES

Company's major constituencies involved its Employees, Customers, Suppliers and Management. In reviewing the implementation of ERP, measuring its impact on these constituencies was essential. In case of Micro Inks, its management was benefited significantly from SAP due to reduced time for data gathering and analysis leading to faster decision making. Later the benefits of new ERP system spread towards suppliers and customers with online access to information and order processing facilities. The impact of ERP implementa-

tion on employees cannot be measured as the new facilities brought a huge lot of new skilled and dedicated employees. All these major constituencies except customers perceived the ERP project outcomes as Very Good. As far as customers are concerned, they perceived benefits to be good which showed that there were areas where there is a scope for improvement.

## COST OF IMPLEMENTATION

The figures of cost of ERP project spent by Micro Inks are not available to maintain its confidentiality. But the components of cost that management of Micro Inks took into consideration while preparing the budget for the software cost were the consulting, process rework, integration testing and a host of other expenses such as hardware, training, license fee and so. Thus their budget figure did not simply represent the price tags of various softwares. This cautious planning at the initial stage helped Micro Inks in implementing ERP package on Budget.

On measuring the impact of post - ERP as compared to pre - ERP on the ongoing support costs, it was found that:

- The cost of staff/personnel, packaged software, database, internal applications and code stayed the same.
- There was an increase of about 10 - 25% in desktop products and services, system operations, management cost and consulting charges.
- Training and consulting costs increased by 26 - 50%.

## CONCLUSION

In order to build up position in international market, Micro Inks realized a need for higher integration among its operations so as to make processes speedier. This was achieved by

implementing the SAP/R3. During the implementation, ERP did not bring changes in the productivity of Micro Inks Ltd. since the focus of the company was to integrate all areas of operations. The system does not consist of HR module. The company adopted to integrate the ERP with the current HR module rather than customizing ERP HR module or modifying the HR practices in the company. The reason for such a step was there was a mismatch between

requirements of the company and availability of those requirements in SAP. The company proved to be successful in implementing the ERP on budget. Also as far as ongoing costs were concerned it had exercised appropriate controls to keep them into line. Micro Inks is now concentrating its resources to upgrade the existing ERP system by paying more emphasis on Customer Relationship Management module and is also planning to add new modules of core applications.

## REFERENCES

### Books and Articles

- [1] Jaiswal, M and Vanapalli, G (2013). Enterprise Resource Planning, Macmillan India Ltd.
- [2] Koch, C (2009). "The ABCs of ERP", ERP-Concepts and Cases, ICFAI Press, 8-18.
- [3] Minu, S. (2003). "Where ERP is going", Network Magazine, October 2003.

### Web

- [1] <http://www.microinks.com>
- [2] <http://www.sap.com>
- [3] <http://www.cio.in/case-study/how-micro-inks-virtualized-core-apps-and-got-rid-downtime>
- [4] <http://www.hclinfosystems.in/sites/default/files/Micro-Inks-Case-Study.pdf>