



## A Study on the implementation difficulties in ERP Application in Apparel Industries

### KEYWORDS

Enterprise Resource Planning, Implementation, Customisation

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**ABSTRACT** Modern business is information driven which influences organisations to implement ERP software for office automation. Ready to use software are available in the industry to suit various requirements of the industries. These ready to use software are developed based on the broad outline of business processes and functionalities mapped in the industry. Every organisation has its own set of processes, procedures and functions which generally fall within the broad outline of the industry but it does not include all the processes. In order to make the ready to use software compatible with the organisation's needs, the ready to use ERP software are altered or customised according to the requirements of the organisation. Success of the business purely depends on the successful implementation of the automation software. Successful implementation of an enterprise is resource planning (ERP) system gives a better competitive edge for the organisation, but high failure rates of ERP project implementation indicates the complexity of the implementation. New Business research shows one surprisingly high numbers of out-of-control IT projects that can sink companies and careers. In this study the authors analyse various problems encountered in the apparel industry in implementing ERP software. This study explores the scope for study on implementation difficulties of ERP software in the Apparel Industry.

### 1. Introduction

The current scenario of globalisation witnesses technology driven business environment changes so rapidly that even small and medium size companies are compelled to change their business processes and strategies. The legacy of business systems is such that though enterprises keep growing by the day, these are not flexible enough to adapt this change and there is discordance between business and information systems in any given organization [1]. Most of the Apparel companies in India prefer to implement ERP software to integrate the functional processes of various departments, to put business processes and systems in place in order to achieve better productivity, profitability and to reduce wastage and hidden losses. Effective ERP software also provides effective control over the business and its processes by providing crucial and timely reports to the management; it also provides vital information for market analysis, and enables forecasting, planning and future course of action. ERP software also enables the organisation to improve Customer Relationship, better Logistic management through the best supply chain mechanisms. It also enables the organisation to maintain the complete information pertaining to the employee and their performance. It also integrates functions of all departments as shown in Figure 1.

ERP for Apparel Industry



Fig.1.

### 2. Background

For best business practices and successful business results, the ERP application has to be completely implemented

across all departments. The implementation of ERP will have a greater impact on the processes of the organisation, functioning of the department, organisation culture, people and the management [2]. In general, ERP implementation in an existing Industry is a transformation process. Any transformation in the Industry has to go through its rough patches of resistance, conflict, setbacks, bottle necks and time delays. This also leads to extensive delay in implementation, which most of the time is treated as a failure to deliver in time.

Harvard Business Review [2] September 2011 states: There were 1471 project implementations examined for comparing their budgets and estimated performance benefits with actual cost and result. Out of these, 27 per cent of the projects had over run the project cost even up to 200 per cent. Panorama's study[3] (2010) reiterates that, 57per cent of ERP implementations take longer than expected due to the unrealistic expectations regarding timeframes.

#### 2.1 Enterprise Resource Planning

Enterprise Resource Planning provides a complete technological solution to integrate and streamline the organisation processes and ensure a smooth flow of information. It bridges the information gap across the organisation and helps to integrate the resources of the business [5]. The ERP provides a solution to eliminate issues related to material management, productivity, customer service, cash flow, finance management, quality, inventory, delivery etc. The ERP also enables the organisation to put systems such as management information system (MIS), decision support system (DSS), data management, data mining in place and also provides vital alerts such as early warnings when the processes deviate from the guidelines provided. In order to understand the complete life cycle of the ERP implementation in an organisation the process needs to commence right from the conceptualisation of ERP implementation stage.

##### 2.1.1 Project Planning

The implementation of ERP is an initiative taken by an individual or group of individuals or management in an organisation. An organisation has to identify its objective and need for implementing the ERP systems in line with the organisation's goals. The ERP implementation will not yield expected results if the objectives are not clearly defined. These objectives must defined keeping parameters such as existing

business needs, the processes and future expansion plans. The organisation must identify a team of technical experts (process owners) who understand the business processes to define the requirements of the automation process. The expert team must study existing ERP products available in the Industry and the software used by peer groups (competitors). The ERP will not provide the expected results unless the existing processes of the organisation are not mapped and defined by the expert team through AS-IS document.

### 2.1.2 Software Selection

Product selection plays a key role in ERP implementation. Successful implementation is determined by the product selection which determines the future course of business. The technical team plays an anchor role in software selection and it must be transparent, critical, and analytical and should function with complete freedom of expression. The software should be flexible to meet the changes in business, scalable to grow with the company, less complex, user friendly, affordable to the organisation and compatible with the internal culture of the organisation. The software should use the latest technology used in the industry. Software selection should not be influenced by an individual or a group, popularity or brand name and should not be biased.

### 2.1.2 Vendor selection

Vendor selection is also a key to successful project implementation. The technical team has to analyse the existence of the product in the market and the experience of the vendor by analysing the number of successful installations, turnover, experience in development and implementation. Technical expertise of the vendor's implementation team or the implementation partner is an important key for implementing ERP in an organisation. The ERP implementation fails due to poor vendor selection and after sales support.

### 2.1.3 Customisation

The ERP software are not ready to use products, these require minor changes in order to make it functional and to meet the complete requirements of the organisation. The technical team in association with the experts of the external implementation team must determine the level of customisation required, by keeping the parameters such as

- Ready to use features of the software by understanding existing business processes of the organisation
- The technical team identifying the Gaps that needs to be bridged, so that the organisation practice becomes akin to the ERP environment. GAP Analysis would determine the depth of restructuring required in an organisation and provide necessary suggestions such as new reports, analysis and better features. This process is inevitable even though it is expensive and time consuming.
- Re-engineering needs organisational restructuring and change in the processes which will help in enhancing productivity and eliminate processes which are not required. Re-engineering the processes must be taken to suit the requirements of the software and for the better process controls.
- The product must be user friendly. Customisation should not exceed 20% of the project scope.

Most of the implementation delays are caused by excessive time taken for customisation. Misunderstanding the level of customisation required or the clear cut understanding of processes of the organisation will result in unnecessary delay at the implementation stage.

### 2.1.4 Architectural Design

Technical requirements of the organisation determine the architectural requirements. Technical requirement include the number of modules required which include e-business and e-commerce applications.

Architectural design is the backbone of the ERP implementation. The implementation team should identify the type of deployment required such as on-premise or host the applica-

tion at a data centre or cloud (Private or public). Based on this the organisation should determine number of user locations, data capturing points, access points, report centres and determine the architectural requirements such as Hardware, Software, Network, Firewall and other infrastructure requirements. The security levels should be clearly defined at the time of preparing SRS. Any ambiguity in architecture design will complicate and delay the implementation.

### 2.1.5 Cost of the software

Proper investment plan with clear cut budget allocation is a key to the implementation success of ERP. Vendors never disclose the complete investment plan which includes (a) product pricing (including number of licenses), (b) hardware infrastructure, (c) technology, (d) training, and implementation and (e) maintenance. Improper fund flow will lead to a delay in implementation. A Service Level Agreement must be signed with complete plan of action with scope for deviations such as delay in implementations and accountability factors on both sides.

### 2.1.6 Data Management

Capturing the right data at the right point is the key to scientific implementation which includes elimination of duplicate and redundant data, and capturing indirect data through data mining. The success of ERP implementation is determined by the use of existing data stored in the organisation in various formats using a data conversion method.

### 2.1.7 Preparing for the Venture

The ERP implementation team must have participation from all stake holders such as technical experts, top and middle level management, end users and finance. ERP implementation may fail due to improper implementation methodology, poor budget allocation, fund flow and non-availability of infrastructure. Failure to draw blue print, Software Requirement Specification (SRS) for implementation, as also defining the responsibility and accountability will lead to implementation failure. Lack of awareness among the employees about ERP and its advantages will lead to resistance to change.

### 2.1.8 Implementation

Prior to the commencement of ERP implementation the organisation must provide the right Information Technology (IT) infrastructure prescribed by the implementation team. Non availability of infrastructure and technology may lead to unnecessary delays in project implementation.

The ERP implementation may not yield expected results in time due to improper installation, configuration, customisation, critical testing with real time data, training of trainers and end users. A conflict of interest between internal and external experts, and resistance to change by the employees will result in a delay of the ERP implementation.

## 3. Proposed Roadmap for ERP Implementation

Fig.2

1. Vision for ERP implementation
<ul style="list-style-type: none"> <li>· Identify and justify the need for ERP Implementation</li> <li>· Preparing ERP Vision Statement</li> <li>· Defining Realistic Expectations</li> <li>· Defining Scope</li> <li>· Business Strategy</li> <li>· Smart use of technology</li> <li>· Plan and Plan for Change</li> </ul>
2. Process Identification and Definition
<ul style="list-style-type: none"> <li>· Identify Technical Team</li> <li>· Identify Process owners</li> <li>· Process Mapping (AS-IS)</li> <li>· Request for Purpose (RFP)</li> </ul>
3. Product Vendor Analysis

<ul style="list-style-type: none"> <li>Flexibility to meet changes and integrate with legacy systems</li> <li>Scalability to grow with the organization</li> <li>Ease of use (User friendliness)</li> <li>Technological edge</li> <li>Financial viability</li> <li>Architecture required</li> </ul>
<b>4. Product Vendor Selection</b> <ul style="list-style-type: none"> <li>ISV Vs. IP (Independent Software vendor Vs. Implementation Partner)</li> <li>Market Presence</li> <li>Technical Expertise</li> <li>Technology used</li> <li>Successful implementations</li> <li>Market Credentials</li> <li>Customer testimonials</li> <li>Service Level Agreements for implementation</li> </ul>
<b>5. Best Business Model</b> <ul style="list-style-type: none"> <li>Distinguish between FUD (fear, uncertainty, and doubt) and reality</li> <li>GAP Analysis</li> <li>Business Process Reengineering</li> <li>Prepare to – Be Document</li> <li>Software Requirement Specification</li> <li>Blue Print Preparation</li> </ul>
<b>6. Finance Planning</b> <ul style="list-style-type: none"> <li>Budgeting (Hardware, Software, Technology, Human Resource,)</li> <li>Forecasting (ERP software pricing complexities, Training, Upgrade, Fixed, Recurring, Technical Manpower)</li> <li>Managing</li> <li>Analyse risk factors</li> <li>Cost of Support and Maintenance</li> </ul>
<b>7. Methodology</b> <ul style="list-style-type: none"> <li>Big Bang</li> <li>Parallel Approach</li> <li>Phased Approach</li> <li>Pilot Approach</li> <li>Hybrid</li> </ul>
<b>8. Project Management</b> <ul style="list-style-type: none"> <li>Cultivating ERP culture</li> <li>Project Management Team</li> <li>Implementation Team</li> <li>Facility Management</li> <li>Resource utilization</li> <li>Customisation</li> <li>Deployment</li> <li>Pilot Run / Sample Reports</li> <li>Software Quality Testing &amp; Certification</li> <li>End user Training</li> </ul>

<b>9. Implementation</b> <ul style="list-style-type: none"> <li>No “best practices” trap</li> <li>Rely on intelligent Experiment</li> <li>Address issues</li> <li>Monitor implementation</li> <li>Review implementation progress</li> <li>Commitment of the Management in Implementation</li> </ul>
<b>10. Rollout</b> <ul style="list-style-type: none"> <li>Go Live</li> <li>Analyse the performance with expectations</li> <li>Review the benefits derived</li> <li>Calculate Return on Investment</li> <li>Post implementation reviews</li> <li>Annual Maintenance</li> <li>Change Management</li> </ul>

Figure 2 shows the proposed road map for successful ERP implementation

### Conclusion

Enterprise Resource Planning implementation is a difficult task. The research conducted in 2010 [4] indicate that most of the ERP implementation over shoot the implementation schedule, cost overrun budget, under deliver the business expectations and deliver less business value. The ERP implementation involves huge financial implications, a lot of human resource at different levels with different frequencies, requires lots of technical expertise and dedicated approach which makes it more difficult for smooth implementation. The study will bring about knowledge of those factors that influence the ERP implementation in terms of finance, human resource and technical aspects.

The apparel industry works with stringent time frames and involves a lot of technical processes. As the product life cycle becomes shorter with lesser lead time to deliver, the industry moves in to automation of its processes with a state of art technology. Automating the processes of the industry through implementing an Enterprise Resource Planning application will be one of the major initiatives taken by the organisation to keep up the pace of the industry's growth.

Failure to implement the ERP application or delay in the process will affect the growth of the industry and result in a huge loss in terms of finance and time. In the long run, delay in implementation diverts the focus of the industry, thus challenging the basic existence of the industry.

The ERP implementation failure is not a threat to one organisation, it is a threat to the apparel industry itself. It indirectly affects the society and the growth of the nation. There is tremendous scope to study the difficulties faced by the organisations in implementing the ERP application in the apparel industry.

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